



IN re WILLIAM J. KING  
No. 86-915

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

801 F.2d 1324; 1986 U.S. App. LEXIS 20348; 231 U.S.P.Q.(BNA) 136

September 19, 1986

PRIOR HISTORY:

Appealed from: Board of Patent Appeals and Interferences.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant sought review of a decision of the Board of Patent Appeals and Interferences affirming the rejection of appellant's patent application.

OVERVIEW: Appellant applied for a patent on a method of applying film coatings to glass panes. The examiner rejected the application, and the Board of Patent Appeals and Interferences affirmed. The court affirmed, holding that appellant's claim was anticipated by a previously patented device with substantially similar characteristics.

OUTCOME: The court affirmed, because appellant's claim was anticipated by a previously patented device.

CORE TERMS: layer, color, oxide, metal, anticipation, thickness, semi-reflective, transmitted, glass, film, disclose, ambient, patent, article of manufacture, wavelength, reflecting, substrate, coating, anticipated, absorbing, interface, enhanced, varying, varied, *prima facie* case, inherently, inherency, light source, composition, transparent

LexisNexis(R) Headnotes

Patent Law: Novelty & Anticipation

Patent Law: Jurisdiction & Review: Standards of Review

[HN1] Anticipation of a claim under 35 U.S.C.S. § 102 can be found only if the prior art reference discloses every element of the claim, and that anticipation is a fact question subject to review under the clearly erroneous standard. The court's review of a finding of anticipation is the same whether it was made by the Board of Patent Appeals and Interferences or by a district court. Under the principles of inherency, if a structure in the prior art necessarily functions in accordance with the limitations of a process or method claim of an application, the claim is anticipated.

Patent Law: Novelty & Anticipation

[HN2] If a previously patented device, in its normal and usual operation, will perform the function which an appellant claims in a subsequent application for process patent, then such application for process patent will be considered to have been anticipated by the former patented device.

Patent Law: Novelty & Anticipation

[HN3] After the Patent and Trademark Office establishes a *prima facie* case of anticipation based on inherency, the burden shifts to appellant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

COUNSEL: Henry C. Nields, Concord Professional Center, of Concord, Massachusetts, argued for Appellant.

Charles A. Wendel, Associate Solicitor, of Arlington, Virginia, argued for Appellee. With him on the brief were Joseph F. Nakamura, Solicitor and Fred E. McKelvey, Deputy Solicitor.

JUDGES: Rich and Davis, Circuit Judges, and Bennett, Senior Circuit Judge.

OPINIONBY: RICH

OPINION: RICH, Circuit Judge.

This appeal is from the Board of Patent Appeals and Interferences (board) decision affirming the examiner's rejection of all four method claims in appellant King's application serial No. 223,840, filed January 9, 1981, for "Light Control with Color Enhancement" for anticipation under 35 USC § 102 by the U.S. patent to Donley, No. 3,978,272, for "Coated Article for Solar Control and Process for its Production," issued August 31, 1976. We affirm.

#### Background

Appellant's invention relates to the use of interference effects to provide control of intensity and color in the transmission of light through solid panes of substantially transparent material such as windows and eyeglass lenses. In particular, appellant claims a method of enhancing colors produced by interference effects from various films applied to the panes. The claims in issue are unusual. They are neither method of manufacture claims nor method of use claims. What they appear to be, and the board so found, is a description of what happens when the structure disclosed in appellant's application and, arguably, disclosed in Donley, is placed in ambient light. Claim 1, the only independent claim, reads:

1. A method of enhancing in a predetermined way color effects produced by ambient light while controlling light intensity produced thereby, comprising the following steps:

reflecting with a phase change substantially equal to radians between 1 and 25% of the ambient light at an interface while permitting substantially all of the remainder to continue as transmitted light,

permitting said transmitted light to travel without reflection and with absorption insufficient to mask the desired enhancement to an absorbing layer and then

reflecting a portion of said transmitted light at said absorbing layer while permitting the remainder to continue as retransmitted light,

the distance between said interface and said absorbing layer being not less than that required to produce interference, between light reflected from said interface and light reflected from said absorbing layer and subsequently transmitted back through said interface, at some wavelength in the visible spectrum capable of influencing the desired enhancement and not greater than that at which such interference occurs at so many wavelengths in the visible spectrum that color effects are negligible.

The three claims depending from claim one are not argued separately and therefore stand or fall with that claim. *In re Sernaker*, 702 F.2d 989, 217 U.S.P.Q. (BNA) 1, (Fed. Cir. 1983); *In re Burckel*, 592 F.2d 1175, 201 U.S.P.Q. (BNA) 67 (CCPA 1979).

In the parent of the application on appeal, appellant claimed an optical apparatus comprising two coatings -- semi-reflective and dielectric -- on a pane of glass that enables the ratio of the amount of light transmitted through and the amount of light reflected from the window, and the color of light observed emanating from the window, to be varied in a predetermined way. That application also included the method claims on appeal. The claims in the parent application were rejected under § 102 as anticipated by Donley, and that rejection was affirmed by the board on appeal. Appellant filed a continuation application containing all of the original claims, both article and method, and later canceled the article claims. The remaining claims, those on appeal here, are all denominated method claims.

The article disclosed in the instant specification and defined by the article claims in the previous appeal comprises a substantially transparent substrate first coated with a semi-reflective material, such as silver, to a thickness of 500-5,000 angstroms and then coated with a metal oxide material (a dielectric), such as titanium oxide, over the semi-reflective coating. By varying the thickness of the metal oxide layer and the amount of semi-reflective material deposited on the

glass (substrate), the color of the light reflected from the glass toward the light source can be varied and, importantly, so can the degree to which that color is enhanced, respectively. If the metal oxide coating is thick, the color is deep. If the semi-reflective coating is too meager, light incident on the backside of the glass (e.g., from inside a building) will be transmitted through the glass and wash the color out. If the semi-reflective coating is too substantial, too much light incident the front side of the glass will be reflected back toward the natural light source also tending to wash out the chosen color as viewed from the light-side of the glass.

Certain wavelengths of visible light (i.e., colors) are enhanced because light rays reflecting off the outside of the metal oxide layer interfere constructively with (i.e., add to) rays that pass through the metal oxide layer but that are reflected off the semi-reflective layer. Constructive interference occurs because some of the rays at a given wavelength that reflect off the semi-reflective layer and come back toward the light source through the metal oxide layer are in phase with those of the same wavelength reflecting off the metal oxide layer, a result dependent upon the indices of refraction of both layers and the thickness of the metal oxide layer. Thus, certain colors can be created in a calculable way by varying the thickness and composition of the metal oxide layer and enhanced by varying the degree to which the semi-reflective layer reflects light, an effect in turn dependent upon that layer's composition and quantity. Appellant discloses the relevant scientific formulae of interference and reflection of light waves in his application, but further detail here in that regard is not necessary.

#### The Donley Reference

The Donley patent discloses an article of manufacture comprising a transparent glass substrate, a film containing silver bonded to the substrate, and a second film of metal oxide of 200-800 angstroms, formed over the first film. The resultant article provides, according to the abstract, "solar energy control and production of architectural colors." The ratio of light transmitted to that reflected, as well as the transmitted and reflected colors of the article, can be altered "by varying the thickness of the films and/or the selection of the metal oxide overcoat." Donley does not disclose that the above effects are due to interference of light waves reflecting from the metal oxide overcoat and the silver film layer.

#### Issues

The issue of greatest import is whether an article of manufacture in the prior art can be used to support an anticipation rejection of method claims that, in essence, simply define what happens when that article of manufacture is placed in the environment in which the article will be used. We take the opportunity to reaffirm holdings of the Court of Customs and Patent Appeals, while addressing important subsidiary issues as well.

#### OPINION

##### Anticipation, § 102

It is axiomatic that [HN1] anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim, and that anticipation is a fact question subject to review under the clearly erroneous standard. *Lindemann Maschinenfabrik v. American Hoist and Derrick*, 730 F.2d 1452, 1457, 221 U.S.P.Q. (BNA) 481, 485 (Fed. Cir. 1984). Our review of a finding of anticipation is the same whether it was made by the board or by a district court.

Under the principles of inherency, if a structure in the prior art necessarily functions in accordance with the limitations of a process or method claim of an application, the claim is anticipated. This is not to say that the discovery of a new use for an old structure based on unknown properties of the structure might not be patentable to the discoverer as a process. *In re Hack*, 44 C.C.P.A. 954, 245 F.2d 246, 248, 114 U.S.P.Q. (BNA) 161, 163 (CCPA 1957).

##### Article of Manufacture Used to Support a Rejection for Anticipation of Method Claims

Appellant first argues that it is absurd to reject method claims on the ground that they are anticipated by a disclosed article of manufacture. However absurd it may seem to appellant, the law is, and long has been, that "if [HN2] a previously patented device, in its normal and usual operation, will perform the function which an appellant claims in a subsequent application for process patent, then such application for process patent will be considered to have been anticipated by the former patented device." *In re Ackenbach*, 18 C.C.P.A. 769, 45 F.2d 437, 439, 7 U.S.P.Q. 268, 270

(CCPA 1930) (citing with approval *Claude Neon Lights v. E. Machlett & Son*, 27 F.2d 702, 707-08 (2d Cir. 1928)). Accord *In re Watson*, 18 C.C.P.A. 712, 44 F.2d 868, 870, 7 U.S.P.Q. 113, 115 (CCPA 1930); *In re Ernst*, 32 C.C.P.A. 1106, 150 F.2d 133, 135, 66 U.S.P.Q. (BNA) 71, 73 (CCPA 1945) (citing with approval *In re Ackenbach*, *supra*). See generally *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 46 L. Ed. 968, 22 S. Ct. 698 (1902) (prior art device anticipates later process if device carries out process in normal operation). Cf. *In re Tarczy-Hornoch*, 55 C.C.P.A. 1441, 397 F.2d 856, 158 U.S.P.Q. (BNA) 141 (CCPA 1968) (a process claim, otherwise patentable, should not be rejected merely because the application of which it is part discloses apparatus which will inherently carry out the recited steps).

The board found that Donley "clearly discloses the same article of manufacture disclosed in appellant's specification" -- a substrate covered by a silver-containing film and by a titanium metal oxide; that, as the appellant concedes in his brief before us, the thicknesses specified in the Donley reference are the same as those in the instant application over a nontrivial range, namely 500-800 angstroms; and that claim 1 "merely recites steps describing the effect of ambient light transmitted to and through appellant's optical apparatus" and therefore that the Donley device inherently performs the function disclosed in the method claims on appeal when that device is used in "normal and usual operation." We hold that the board made out a *prima facie* case of anticipation under the principles of inherency of appellant's claimed method. See *In re Ackenbach*; *Lindemann*, *supra*. \*

-----Footnotes-----

\* We need not consider the Grubb reference -- cited by the examiner as evidence that the interference color characteristics of prior art dielectric oxide films are related to their thicknesses -- because the board stated in its opinion that the rejection here was based on anticipation of the method claims by the Donley reference alone.

Similarly, we need not, and must not, consider the accidental use doctrine because the board expressly stated that argument was not properly before it and would not be considered.

-----End Footnotes-----

Appellant has failed to show that the board's finding of anticipation was clearly erroneous. Its failure is perhaps in part due to appellant's misapprehension of its burden at the PTO and therefore its failure in the PTO to introduce evidence -- on which it could have relied here -- sufficient to rebut the board's *prima facie* case of anticipation of the claimed method.

Contrary to appellant's reasoning, [HN3] after the PTO establishes a *prima facie* case of anticipation based on inherency, the burden shifts to appellant to "prove that the subject matter shown to be in the prior art does not possess the characteristic relied on." *In re Swinehart*, 58 C.C.P.A. 1027, 439 F.2d 210, 212-13, 169 U.S.P.Q. (BNA) 226, 229 (CCPA 1971). Accord *In re Fitzgerald*, 619 F.2d 67, 70, 205 U.S.P.Q. (BNA) 594, 596 (CCPA 1980), quoted with approval in *In re Thorpe*, 777 F.2d 695, 698, 227 U.S.P.Q. (BNA) 964, 966 (Fed. Cir. 1985); *In re Best*, 562 F.2d 1252, 1255, 195 U.S.P.Q. (BNA) 430, 433-34 (CCPA 1977); *In re Ludtke*, 58 C.C.P.A. 1159, 441 F.2d 660, 664, 169 U.S.P.Q. (BNA) 563, 566 (1971). Here, appellant's burden before the board was to prove that Donley's structure does not perform the so-called method defined in the claims when placed in ambient light. Appellant did not satisfy that burden. It did not suffice merely to assert that Donley does not inherently achieve enhanced color through interference effects, challenging the PTO to prove the contrary by experiment or otherwise. The PTO is not equipped to perform such tasks. See *In re Brown*, 59 C.C.P.A. 1036, 459 F.2d 531, 535, 173 U.S.P.Q. (BNA) 685, 688 (CCPA 1972), quoted with approval in *In re Fitzgerald*; *In re Best*, *supra*.

The board's finding of anticipation based on the finding that all that need be done to perform what appellant's claims recite is to place the Donley article in ambient light cannot be clearly erroneous in the face of the supporting evidence (1) that Donley's and appellant's structures are the same, as the board found both here and in the prior appeal, and (2)

that Donley expressly states that the thickness of its reflective layer and the thickness and composition of its metal oxide layer can be varied to achieve different reflectance and transmittance characteristics and colors. The only arguable shortcoming we see with Donley respecting its adequacy to support an anticipation rejection is Donley's failure to articulate a scientific explanation of why his structure behaves as it does, namely, that optical interference causes color which changes when the thickness of the metal oxide layer is varied. Finally, to the extent that appellant thinks he is entitled to a patent because he sets out the scientific formulae explaining what happens to light as it passes through the device, it is well settled that he is not so entitled. See *Parker v. Flook*, 437 U.S. 584, 198 U.S.P.Q. (BNA) 193, 57 L. Ed. 2d 451, 98 S. Ct. 2522 (1978).

**Conclusion**

The decision of the board is affirmed.

**AFFIRMED. \*\*\*\*-----**

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IN RE DAVID C. PAULSEN  
94-1012

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

30 F.3d 1475; 1994 U.S. App. LEXIS 19882; 31 U.S.P.Q.2D(BNA) 1671

August 3, 1994, Decided

**PRIOR HISTORY:**Appealed from: United States Patent and Trademark Office Board of Patent Appeals and Interferences. (Reexamination Nos. 90/002,014, 90/002,053, and 90/002,179)

**DISPOSITION: AFFIRMED.**

**CASE SUMMARY:**

**PROCEDURAL POSTURE:**Appellant sought review of a decision of the United States Patent and Trademark Office Board of Patent Appeals and Interferences, which affirmed the examiner's rejection of various claims, and adopted the examiner's determination that cited prior art would have suggested the claim's subject matter. The appeal was filed against appellee Government.

**OVERVIEW:**The reviewing court affirmed, holding that since one of ordinary skill in the art was capable of providing the circuitry necessary to make the device operable for use as a computer, as a matter of law, the prior art was sufficiently enabling to serve as a reference. Given the nature of the problems confronted by the inventors, one of ordinary skill in the art would have consulted the mechanical arts, and thus, the cited references were reasonably pertinent and the finding that the references were analogous was not clearly erroneous. The claimed invention had to be considered as a whole, multiple cited prior art references had to suggest the desirability of being combined, and the references had to be viewed without the benefit of hindsight afforded by the disclosure. Having reviewed the prior art, the court concluded that there was no error in rejecting those claims for obviousness.

**OUTCOME:**The board's decision was affirmed because one of ordinary skill in the art was capable of making the device operable for use as a computer, so that as a matter of law, the prior art was sufficiently enabling to serve as a reference.

**CORE TERMS:**patent, invention, display, housing, calculator, inventor, skill, specification, reexamination, hinge, obviousness, examiner, disclose, lid, nonobviousness, anticipated, laptop, portable computer, disclosure, preamble, viewing, latch, portable, capability, keyboard, anticipation, enablement, extraneous, appearing, patentee

LexisNexis(R) Headnotes

**Patent Law: Novelty & Anticipation**

[HN1] Anticipation is a question of fact subject to review under the clearly erroneous standard. A rejection for anticipation under 35 U.S.C.S. § 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference. In addition, the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.

**Patent Law: Specification & Claims: Claim Preambles**

[HN2] The preamble of a claim does not limit the scope of the claim when it merely states a purpose or intended use of the invention. However, terms appearing in a preamble may be deemed limitations of a claim when they give meaning to the claim and properly define the invention. Although no litmus test exists as to what effect should be accorded to words contained in a preamble, review of a patent in its entirety should be made to determine whether the inventors intended such language to represent an additional structural limitation or mere introductory language.

**Patent Law: Specification & Claims: Claim Preambles**

**Patent Law: Jurisdiction & Review: Standards of Review**

[HN3] A prior art reference must contain preamble limitations. Claim construction is a legal question that the court addresses de novo.

**Patent Law: Specification & Claims: Claim Language**

**Patent Law: U.S. Patent & Trademark Office Prosecution Procedures: Examination of Applications**

**Patent Law: Infringement: Claim Interpretation**

[HN4] Although it is entirely proper to use the specification to interpret what the patentee meant by a word or phrase in the claim this is not to be confused with adding an extraneous limitation appearing in the specification, which is improper. By extraneous, it is meant that a limitation read into a claim from the specification wholly apart from any need to interpret particular words or phrases in the claim. Moreover, when interpreting a claim, words of the claim are generally given their ordinary and accustomed meaning, unless it appears from the specification or the file history that they were used differently by the inventor.

**Patent Law: Infringement: Claim Interpretation**

[HN5] The term "computer" is not associated with any one fixed or rigid meaning, as confirmed by the fact that it is subject to numerous definitions and is used to describe a variety of devices with varying degrees of sophistication and complexity. However, despite the lack of any standard definition for this ubiquitous term, it is commonly understood by those skilled in the art that at the most fundamental level, a device is a computer if it is capable of carrying out calculations.

**Patent Law: Specification & Claims: Claim Language**

**Patent Law: Specification & Claims: Applicant's Theory of Invention**

**Patent Law: Infringement: Claim Interpretation**

[HN6] Although an inventor is indeed free to define the specific terms used to describe his or her invention, this must be done with reasonable clarity, deliberateness, and precision. Where an inventor chooses to be his own lexicographer and to give terms uncommon meanings, he must set out his uncommon definition in some manner within the patent disclosure so as to give one of ordinary skill in the art notice of the change.

**Patent Law: Novelty & Anticipation**

**Patent Law: Specification & Claims: Enablement Requirement**

**Patent Law: Specification & Claims: Claim Preambles**

[HN7] A prior art reference must be considered together with the knowledge of one of ordinary skill in the pertinent art. A reference need not, however, explain every detail since it is speaking to those skilled in the art. The ultimate issue of enablement is one of law based on underlying factual findings.

**Patent Law: Novelty & Anticipation**

[HN8] Since anticipation is the ultimate of obviousness, the subject matter of anticipation claims is necessarily obvious and a court need not consider them further.

**Patent Law: Nonobviousness: Tests & Proof of Obviousness**

**Patent Law: Jurisdiction & Review: Standards of Review**

[HN9] Obviousness is a question of law to be determined from the facts. Thus, the conclusion of obviousness by the Patent and Trademark Office Board of Patent Appeals and Interferences is reviewed for error as a matter of law, and underlying factual inquiries are reviewed for clear error.

**Patent Law: Novelty & Anticipation**

**Patent Law: Specification & Claims: Claim Language**

**Patent Law: U.S. Patent & Trademark Office Prosecution Procedures: Examination of Applications**

**Patent Law: Jurisdiction & Review: Standards of Review**

[HN10] Whether a prior art reference is analogous is a fact question that a court reviews under the clearly erroneous standard. References may still be analogous if they are reasonably pertinent to the particular problem with which the inventor is involved.

Patent Law: Nonobviousness: Tests & Proof of Obviousness

Patent Law: Infringement: Burdens of Proof

Patent Law: Jurisdiction & Review: Standards of Review

[HN11] When a patentee offers objective evidence of nonobviousness, there must be a sufficient relationship between that evidence and the patented invention. The term "nexus" is used, in this context, to designate a legally and factually sufficient connection between the proven success and the patented invention, such that the objective evidence should be considered in the determination of nonobviousness. The burden of proof as to this connection or nexus resides with the patentee.

Patent Law: Nonobviousness: Tests & Proof of Obviousness

Patent Law: Infringement: Burdens of Proof

Patent Law: Jurisdiction & Review: Standards of Review

[HN12] In reviewing the obviousness conclusions of the Patent and Trademark Office Board of Patent Appeals and Interferences, a court is guided by the well-settled principles that the claimed invention must be considered as a whole, multiple cited prior art references must suggest the desirability of being combined, and the references must be viewed without the benefit of hindsight afforded by the disclosure.

COUNSEL: J. Georg Seka, Attorney, Townsend and Townsend Khourie and Crew, of San Francisco, California, argued for appellant.

Harris Pitlick, Attorney, Commissioner of Patents and Trademarks, of Arlington, Virginia, argued for appellee. With him on the brief was Fred E. McKelvey.

JUDGES: Before NIES, MICHEL, and LOURIE, Circuit Judges.

OPINIONBY: LOURIE

OPINION:

[\*1477] LOURIE, Circuit Judge.

AST Research, Inc., (AST) n1 appeals from the July 23, 1993 decision of the United States Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences sustaining the final rejection upon reexamination of claims 1-4, 6, 9-12, and 18-34 of U.S. Patent 4,571,456. We affirm.

-----Footnotes-----

n1 AST Research is the current record owner of the patent in issue.

-----End Footnotes-----

[\*1478] BACKGROUND

The '456 patent, entitled "Portable Computer," was issued to David C. Paulsen et al., on February 18, 1986. The claims of the patent are directed to a portable computer contained within a compact metal case. n2 A salient feature of the claimed invention is its "clam shell" configuration, in which the computer's display housing is connected to the computer at its midsection by a hinge assembly that enables the display to swing from a closed, latched position for portability and protection to an open, erect position for viewing and operation. Computers consistent with this design are commonly referred to as "laptop" computers.

-----Footnotes-----

n2 Claim 1 is the broadest claim in the '456 patent and is illustrative of the claimed invention. The claim reads as follows:

1. A portable computer constructed to be contained within an outer case for transport and to be erectable to a viewing and operating configuration for use, said computer comprising

a base,  
a display housing,  
a top cover,  
a rear cover,

hinge means for permitting swinging movement of the display housing about an axis of rotation adjacent the rear end of the display housing and from a closed and latched position of the display housing on the base to an erected position for viewing by an operator, and including stop means for holding the display housing at the desired angle for viewing,

the hinge means being located in a mid portion of the base and wherein the hinge means permit swinging movement of the display housing to an erected position in which the inner surface of the display housing is held in an upward and rearwardly inclined angle for viewing by an operator in front of the computer, and

including a keyboard in the portion of the base which is exposed by the movement of the display housing to the erected position.

-----End Footnotes-----

On April 27, 1990, and subsequently on June 12, 1990 and October 22, 1990, requests were filed in the PTO for reexamination of the '456 patent. See 35 U.S.C. § 302 (1988). The requests were consolidated into a single proceeding for the reexamination of claims 1 through 34. n3 On August 9, 1991, the examiner issued a final office action in the reexamination rejecting claims 1-4, 6, 7, 9-12, and 18-34. Independent claims 1 and 18 were rejected under 35 U.S.C. § 102 (b) (1988) as being anticipated by Japanese Application 47-14961 to Yokoyama. Additionally, claims 1-4, 6, 7, 9-12, and 18-34 were rejected under 35 U.S.C. § 103 (1988) as being obvious over the Yokoyama reference in view of other prior art.  
n4

-----Footnotes-----

n3 As originally issued, the '456 patent contained claims 1 through 19. New claims 20 through 34 were subsequently added during reexamination.

n4 Claims 5, 8, and 13-17 were allowed by the examiner in the reexamination proceeding. These claims are not at issue in this appeal.

-----End Footnotes-----

On appeal, the Board affirmed the examiner's rejections except as to claim 7. In sustaining the rejections of claims 1 and 18, the Board rejected the appellant's n5 contention that Yokoyama is not a proper prior art reference under sections 102 or 103. The Board concluded that although Yokoyama discloses a calculator, a calculator is a type of computer. The Board also rejected the appellant's argument that Yokoyama is a non-enabling reference. Respecting the § 103 rejection of claims 2-4, 6, 9-12, and 19-34, the Board adopted the examiner's determination that the cited prior art would have suggested the claim subject matter to a person of ordinary skill in the art. n6

-----Footnotes-----

n5 The party in interest during the reexamination proceeding was Grid Systems Corp., the original assignee of the '456 patent.

n6 Because the Board adopted the examiner's position as its own, we shall refer to the examiner's findings and conclusions as those of the Board.

-----End Footnotes-----

AST, the present assignee of the '456 patent, now appeals from the Board's decision.

## DISCUSSION

### Claims 1 and 18

We first address AST's challenge to the Board's determination that claims 1 and 18 are anticipated by the Yokoyama reference. [HN1] Anticipation is a question of fact subject to review under the "clearly erroneous" standard. *In re King*, 801 F.2d 1324, 1326, 231 USPQ

136, 138 (Fed. Cir. 1986). A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single [\*1479] prior art reference. *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990). In addition, the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention. Id.

The Yokoyama reference discloses a desktop calculator contained within a housing having the form of a portable attache case. The front half of the case consists of a lid that is hinged at the midsection of the case. Connected to the inside of the lid is a display which is able to be viewed when the lid is opened to a vertical position. A keyboard is also exposed for operation when the lid is opened. When the device is to be transported, the lid is closed and latched to protect the display and the keyboard. Notwithstanding that Yokoyama discloses a device meeting the express limitations set out in claims 1 and 18 relating to a base, a display housing, a keyboard, etc., AST maintains that the claims are not anticipated by Yokoyama because that reference discloses a calculator, not a computer. n7 AST contends that the Board erred in construing the term "computer" broadly to encompass a calculator such as that disclosed in Yokoyama.

-----Footnotes-----

n7 AST does not dispute that all the limitations of claims 1 and 18 are otherwise described in the Yokoyama reference.

-----End Footnotes-----

We note at the outset that the term "computer" is found only in the preamble of the claims at issue. [HN2] The preamble of a claim does not limit the scope of the claim when it merely states a purpose or intended use of the invention. See *DeGeorge v. Bernier*, 768 F.2d 1318, 1322 n.3, 226 USPQ 758, 761 n.3 (Fed. Cir. 1985). However, terms appearing in a preamble may be deemed limitations of a claim when they "give meaning to the claim and properly define the invention." *Gerber Garment Technology, Inc. v. Lectra Sys., Inc.*, 916 F.2d 683, 688, 16 USPQ2d 1436, 1441 (Fed. Cir. 1990) (quoting *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 896, 221 USPQ 669, 675 (Fed. Cir.), cert. denied, 469 U.S. 857, 83 L. Ed. 2d 120, 105 S. Ct. 187 (1984)). Although no "litmus test" exists as to what effect should be accorded to words contained in a preamble, review of a patent in its entirety should be made to determine whether the inventors intended such language to represent an additional structural limitation or mere introductory language. *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989); *In re Stencil*, 822 F.2d 751, 754, 4 USPQ2d 1071, 1073 (Fed. Cir. 1987).

In the instant case, review of the '456 patent as a whole reveals that the term "computer" is one that "breathes life and meaning into the claims and, hence, is a necessary limitation to them." *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 866, 228 USPQ 90, 92 (Fed. Cir. 1984). Thus, to anticipate claims 1 and 18, the Yokoyama reference must disclose a type of "computer." See *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988) [HN3] (prior art reference must contain preamble limitations). However, to properly compare Yokoyama with the claims at issue, we must construe the term "computer" to ascertain its scope and meaning. Claim construction is a legal question

that we address de novo. See *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1577, 27 USPQ2d 1836, 1839 (Fed. Cir. 1993).

Pursuant to its practice of giving claims in a reexamination their broadest reasonable interpretation consistent with the specification, see *In re Etter*, 756 F.2d 852, 858, 225 USPQ 1, 5 (Fed. Cir. 1985), the Board construed the term "computer" to include a calculator. The Board's interpretation was supported by authoritative lexicographic sources that confirmed that a calculator is considered to be a particular type of computer by those of ordinary skill in the art. AST alleges that the Board's interpretation was erroneous because it ignores the inventors' own definition of "computer." AST asserts that the specification plainly indicates that the inventors intended to limit the claimed invention to a device having a display with graphics and text capability, sufficient data processing capacity, communication ports, a telephone connection, [\*1480] etc., features normally absent in a calculator.

In an effort to avoid the anticipating disclosure of Yokoyama, AST engages in a post hoc attempt to redefine the claimed invention by impermissibly incorporating language appearing in the specification into the claims. [HN4] Although "it is entirely proper to use the specification to interpret what the patentee meant by a word or phrase in the claim, . . . this is not to be confused with adding an extraneous limitation appearing in the specification, which is improper. By 'extraneous,' we mean a limitation read into a claim from the specification wholly apart from any need to interpret . . . particular words or phrases in the claim." *E.I. Du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433, 7 USPQ2d 1129, 1131 (Fed. Cir.), cert. denied, 488 U.S. 986, 102 L. Ed. 2d 572, 109 S. Ct. 542 (1988). Moreover, when interpreting a claim, words of the claim are generally given their ordinary and accustomed meaning, unless it appears from the specification or the file history that they were used differently by the inventor. See *Carroll Touch*, 15 F.3d at 1577, 27 USPQ2d at 1840.

[HN5] The term "computer" is not associated with any one fixed or rigid meaning, as confirmed by the fact that it is subject to numerous definitions and is used to describe a variety of devices with varying degrees of sophistication and complexity. However, despite the lack of any standard definition for this ubiquitous term, it is commonly understood by those skilled in the art that "at the most fundamental level, a device is a computer if it is capable of carrying out calculations." *National Advanced Sys., Inc. v. United States*, 26 F.3d 1107, slip op. at 10 (Fed. Cir. 1994). AST cannot dispute that a calculator falls within that basic definition. That a calculator may be a "limited function" computer as opposed to a "full function" computer does not change the fact that it is nonetheless a computer. n8

-----Footnotes-----

n8 We are unpersuaded by the declarations submitted by the appellants which draw a distinction between a calculator and a computer based on comparative functions and capabilities. As the Board correctly concluded, such extrinsic evidence fails to rebut the premise that a calculator is a computer, albeit one with limited functions.

-----End Footnotes-----

[HN6] Although an inventor is indeed free to define the specific terms used to describe his or her invention, this must be done with reasonable clarity, deliberateness, and precision. "Where an inventor chooses to be his own lexicographer and to give terms uncommon

meanings, he must set out his uncommon definition in some manner within the patent disclosure" so as to give one of ordinary skill in the art notice of the change. See *Intellicall, Inc., v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88, 21 USPQ2d 1383, 1386 (Fed. Cir. 1992). Here, the specification of the '456 patent does not clearly redefine the term "computer" such that one of ordinary skill in the art would deem it to be different from its common meaning. The specification merely describes in a general fashion certain features and capabilities desirable in a portable computer. This description, however, is far from establishing a specialized definition restricting the claimed invention to a computer having a specific set of characteristics and capabilities.

We conclude that the Board did not clearly err in determining that the Yokoyama reference meets all the limitations of claims 1 and 18 as properly construed, including the "computer" limitation.

Alternatively, AST asserts that Yokoyama does not anticipate claims 1 and 18 because it is not enabling. AST argues that Yokoyama only discloses a box for a calculator and thus does not teach how to make and use a portable calculator. This argument, however, fails to recognize that [HN7] a prior art reference must be "considered together with the knowledge of one of ordinary skill in the pertinent art." *In re Samour*, 571 F.2d 559, 562, 197 USPQ 1, 3-4 (CCPA 1978); see also *DeGeorge*, 768 F.2d at 1323, 226 USPQ at 762 (Fed. Cir. 1985) (a reference "need not, however, explain every detail since [it] is speaking to those skilled in the art"). As the Board found below, the level of skill to which Yokoyama is addressed was "quite advanced" at the time the '456 patent was filed and that "one of ordinary skill in the art [\*1481] certainly was capable of providing the circuitry necessary to make the device operable for use as a computer." We discern no clear error in the Board's findings and conclude as a matter of law that Yokoyama is sufficiently enabling to serve as a section 102(b) reference. n9 See *Gould v. Quigg*, 822 F.2d 1074, 1077, 3 USPQ2d 1302, 1303-04 (Fed. Cir. 1987) (ultimate issue of enablement is one of law based on underlying factual findings).

-----Footnotes-----

n9 We also note that under the enablement standard that AST would have us apply to Yokoyama, the '456 patent itself would be non-enabling. The '456 patent similarly relies on the knowledge and skill of those skilled in the art. If detailed disclosure regarding implementation of known electronic and mechanical components necessary to build a computer were essential for an anticipating reference, then the disclosure in the '456 patent would also fail to satisfy the enablement requirement. See *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1569, 7 USPQ2d 1057, 1063 (Fed. Cir. 1988).

-----End Footnotes-----

Accordingly, we affirm the Board's rejection of claims 1 and 18 as being anticipated by Yokoyama. As a result, we need not review the obviousness rejections of these claims. See *In re Baxter Travenol Labs*, 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1992) [HN8] ("Since anticipation is the ultimate of obviousness, the subject matter of these claims is necessarily obvious and we need not consider them further."). Additionally, because AST does not argue the patentability of claims 9-12 and 19-27 separately from that of claims 1 and 18, the appeal of these claims also fails. See *In re Albrecht*, 579 F.2d 92, 93-94, 198 USPQ 208, 209 (CCPA 1978); *In re King*, 801 F.2d at 1325, 231 USPQ at 137.

## Claims 2-4, 6, and 28-34

Next, AST challenges the Board's rejection of claims 2-4, 6, and 28-34 on the ground of obviousness. [HN9] Obviousness is a question of law to be determined from the facts. *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Thus, the Board's conclusion of obviousness is reviewed for error as a matter of law, *In re De Blauwe*, 736 F.2d 699, 703, 222 USPQ 191, 195 (Fed. Cir. 1984), and underlying factual inquiries are reviewed for clear error, *In re Caveney*, 761 F.2d 671, 674, 226 USPQ 1, 3 (Fed. Cir. 1985).

### 1. Non-Analogous Art

AST argues that claims 2, 6, and 28-34, which add particular features to the hinge and latch means of the display housing, n10 were erroneously rejected over non-analogous references directed to hinges and latches as used in a desktop telephone directory, a piano lid, a kitchen cabinet, a washing machine cabinet, a wooden furniture cabinet, or a two-part housing for storing audio cassettes. AST maintains that because the references pertain to fields of endeavor entirely unrelated to computers and are not pertinent to the problems faced by the present inventors, they do not render the claims obvious. It argues that the cited references, dealing with such articles as cabinets and washing machines, do not deal with the particular environment presented in portable computers. This argument rests on too narrow a view of what prior art is pertinent to the invention here.

-----Footnotes-----

n10 Generally, claims 2 and 6, both depending from claim 1, recite torsion spring means and recessed latch means for the display housing, respectively. Claims 28, 29, 30, 33, and 34 are directed to a portable computer having concealed hinges, and claims 31 and 32 recite recessed latch means and retractable legs, respectively.

-----End Footnotes-----

[HN10] Whether a prior art reference is "analogous" is a fact question that we review under the "clearly erroneous" standard. *In re Clay*, 966 F.2d 656, 658, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992). Although there is little dispute that the prior art references cited here (other than Yokoyama) are not within the same field of endeavor as computers, such references may still be analogous if they are "reasonably pertinent to the particular problem with which the inventor is involved." Id.; see also *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072, 30 USPQ2d 1377, 1379 (Fed. Cir. 1994). The problems encountered by the inventors of the '456 patent were problems that were not unique to portable computers. They concerned how to connect and secure the computer's display housing to the computer while meeting certain size constraints [\*1482] and functional requirements. The prior art cited by the examiner discloses various means of connecting a cover (or lid) to a device so that the cover is free to swing radially along the connection axis, as well as means of securing the cover in an open or closed position. We agree with the Board that given the nature of the problems confronted by the inventors, one of ordinary skill in the art "would have consulted the mechanical arts for housings, hinges, latches, springs, etc." Thus, the cited references are "reasonably pertinent" and we therefore conclude that the Board's finding that the references are analogous was not clearly erroneous.

## 2. Secondary Considerations

In support of its contention that the Board erred in rejecting claims 2-4, 6, and 28-34 as obvious, AST points to evidence of commercial success, copying, and professional recognition of Grid laptop computers, devices covered by claims 1 and 18 of the '456 patent. For example, from the introduction of their laptop computers in 1983 to the end of 1990, Grid enjoyed cumulative sales of approximately \$489 million in addition to licensing royalties of \$7.5 million. Grid also received several design awards and exceptional praise from the industry press.

Although such evidence is indeed impressive, AST has not shown that it is relevant to the claims at issue and thus entitled to weight. [HN11] When a patentee offers objective evidence of nonobviousness, there must be a sufficient relationship between that evidence and the patented invention. See *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392, 7 USPQ2d 1222, 1226 (Fed. Cir.), cert. denied, 488 U.S. 956, 102 L. Ed. 2d 383, 109 S. Ct. 395 (1988). "The term 'nexus' is used, in this context, to designate a legally and factually sufficient connection between the proven success and the patented invention, such that the objective evidence should be considered in the determination of nonobviousness. The burden of proof as to this connection or nexus resides with the patentee." Id. Here, AST has failed to carry its burden.

AST limits its argument respecting the evidence adduced to demonstrate nonobviousness to laptop computers covered by claims 1 and 18, claims which we have previously concluded are unpatentable under section 102. n11 AST has not established that the commercial success, copying, and professional recognition experienced by Grid laptop computers are probative of the nonobviousness of the inventions of claims 2-4, 6, and 28-34. It has not been shown that such evidence is relevant to a computer within the scope of these claims, i.e., that it is attributable to the inventions of these claims, rather than to extraneous factors such as advertising and marketing or to the features possessed by the computers of claims 1 and 18. Because AST has failed to establish a sufficient legal relationship between the purported evidence of nonobviousness and the claimed invention, evidence pertinent to claims 1 and 18 therefore carries no weight with respect to claims 2-4, 6, and 28-34.

-----Footnotes-----

n11 The only evidence connecting the purported commercial success and professional praise with the '456 patent is the declaration of J. Georg Seka, counsel for AST, stating that claims 1 and 18 cover the Grid "Compass" laptop computer and certain models made by Toshiba. Even assuming that a nexus exists as to those two claims, evidence of nonobviousness is irrelevant for patentability purposes when an invention is anticipated under section 102.

-----End Footnotes-----

## 3. Obviousness Generally

Beyond what we have said respecting the applicability of the cited prior art and the asserted evidence of secondary considerations, we have considered AST's basic contention that the prior art does not suggest the invention of the rejected claims and view it to be unpersuasive. [HN12] In reviewing the Board's obviousness conclusions, we have been

guided by the well-settled principles that the claimed invention must be considered as a whole, multiple cited prior art references must suggest the desirability of being combined, and the references must be viewed without the benefit of hindsight afforded by the disclosure. See *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir.), cert. denied, 479 U.S. 827, 107 S. Ct. 106, 93 [\*1483] L. Ed. 2d 55 (1986). We have carefully reviewed the prior art of record and conclude that the Board did not err in rejecting claims 2-4, 6, and 28-34 as having been obvious.

#### **CONCLUSION**

The Board did not clearly err in rejecting claims 1 and 18 as being anticipated by the Yokoyama reference. Consequently, the rejection of claims 9-12 and 19-27 must also be affirmed. The Board did not err in rejecting claims 2-4, 6, and 28-34 as being obvious over Yokoyama and other prior art. Accordingly, we affirm the decision of the Board.

**AFFIRMED**



HELIFIX LIMITED, Plaintiff-Appellant, v. BLOK-LOK, LTD. and WILLIAM SCOTT BURNS,  
Defendants-Appellees, v. HELIFIX NORTH AMERICA CORPORATION, Third Party  
Counterclaim Defendant.  
99-1196

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

208 F.3d 1339; 2000 U.S. App. LEXIS 6300; 54 U.S.P.Q.2D(BNA) 1299

April 7, 2000, Decided

**PRIOR HISTORY:** Appealed from: United States District Court for the District of Massachusetts. Judge Robert E. Keeton.

**DISPOSITION:** AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED.

**CASE SUMMARY:**

**PROCEDURAL POSTURE:** Appellant challenged the decision of the United States District Court for the District of Massachusetts, which denied its motion to enjoin appellee from inducing infringement of, and contributorily infringing on a patent, and granted summary judgment of patent invalidity in favor of appellee on appellee's counterclaim.

**OVERVIEW:** Appellant filed suit for a preliminary injunction against appellee, alleging that appellee was infringing and inducing infringement of its patent on a concrete wall fastening system, infringing appellant's copyrighted catalogues, and falsely designating the sponsorship of non-appellant products as appellant products. Appellee counterclaimed for a declaratory judgment of patent invalidity. On appeal, the court affirmed the denial of the preliminary injunction, but vacated the grant of summary judgment to appellee. Appellee failed to provide clear and convincing evidence that appellant's 1993 trade show brochure would have enabled a person of ordinary skill in the art to make or obtain a tool capable of being used in the claimed method without an undue amount of experimentation. Therefore there was not evidence that the brochure anticipated the claim of the patent. However, for purposes of summary judgment, the brochure could not be relied upon as an enabling description of the invention.

**OUTCOME:** Denial of preliminary injunction affirmed, because there was not clear and convincing evidence that appellant's brochure anticipated the claim of the patent. Summary judgment to appellee vacated, because the brochure could not be relied upon as an enabling description of the invention.

**CORE TERMS:** patent, brochure, tie, invention, summary judgment, preliminary injunction, on-sale, invalidity, wythe, helical, skill, specification, anticipation, masonry, ties, rotate, clear and convincing evidence, issues of material fact, genuine, teach, pat, distributed, drive, genuine issue of material fact, infringing, patenting, invalid, recited, wythes, impactingly

LexisNexis(R) Headnotes

Civil Procedure: Summary Judgment

Civil Procedure: Injunctions: Preliminary & Temporary Injunctions

Civil Procedure: Appeals: Appellate Jurisdiction: Interlocutory Orders

[HN1] An appellate court exercises its discretion to invoke pendent appellate jurisdiction over an interlocutory grant of summary judgment where it is closely interrelated factually to the preliminary injunction.

Civil Procedure: Summary Judgment: Summary Judgment Standard

[HN2] An appellate court reviews a grant of summary judgment de novo, and affirms only if, when the facts are viewed in the light most favorable to the non-moving party and all doubts are resolved in favor of the non-movant, there are no genuine issues of material fact and the moving party is entitled to judgment as a matter of law.

Patent Law: Infringement: Burdens of Proof

[HN3] A patent is presumed to be valid, 35 U.S.C.S. § 282 (1994), and this presumption only can be overcome by clear and convincing evidence to the contrary.

Patent Law: Novelty & Anticipation

[HN4] An invention is anticipated under *35 U.S.C.S. § 102(b)* if it was described in a printed publication in the United States more than one year prior to the date of application for patent in the United States.

Civil Procedure: Appeals: Standards of Review: De Novo Review

Patent Law: Novelty & Anticipation

[HN5] The first step of an anticipation analysis is claim construction. Claim construction is a question of law that is reviewed de novo.

Public Contracts Law: Bids & Formation: Ambiguity & Mistake

Patent Law: Infringement: Acts of Infringement

[HN6] In construing patent claims, a court looks to the intrinsic evidence of record--the claims, the specification, and, if in evidence, the prosecution history. If intrinsic evidence resolves all ambiguities, extrinsic evidence is not considered.

Patent Law: Novelty & Anticipation

Patent Law: Infringement: Summary Judgment

[HN7] The second step in an anticipation analysis involves a comparison of the construed claim to the prior art. To be anticipating, a prior art reference must disclose each and every limitation of the claimed invention, must be enabling, and must describe the claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention. If there is a genuine issue of material fact relevant to any one of these factors, summary judgment is not proper.

Patent Law: Novelty & Anticipation

[HN8] In conducting an anticipation analysis, a court should consider the educational level of the inventor; the type of problems encountered in the art; the prior art solutions to those problems; the rapidity with which innovations are made; the sophistication of the technology, and the educational level of workers in the field.

Patent Law: Specification & Claims: Enablement Requirement

[HN9] Even if the claimed invention is disclosed in a printed publication, that disclosure will not suffice as prior art if it was not enabling.

Patent Law: U.S. Patent & Trademark Office Prosecution Procedures: Continuation Applications

[HN10] The Patent Office can issue a restriction requirement if it finds that two or more inventions claimed in a patent application are independent and distinct. *35 U.S.C.S. § 121* (1994).

Patent Law: U.S. Patent & Trademark Office Prosecution Procedures: Continuation Applications

[HN11] A process and apparatus (tool) for its practice can be restricted if either the process as claimed can be practiced by another materially different apparatus or by hand or the apparatus as claimed can be used to practice another and materially different process.

Patent Law: U.S. Patent & Trademark Office Prosecution Procedures: Continuation Applications

[HN12] In response to a restriction requirement, an applicant must elect one invention for examination. *37 C.F.R. § 1.142(a)* (1999). Claims to the non-elected invention(s) are withdrawn from consideration and must be canceled before the application is allowed to issue as a patent. *37 C.F.R. § 1.142(b)* (1999).

Patent Law: Statutory Bars: On Sale

[HN13] Under *35 U.S.C.S. § 102(b)*, a patent is invalid by reason of the on-sale bar if the invention was on sale in the United States more than one year prior to the date of application for the patent in the United States.

**Patent Law: Statutory Bars: On Sale**

[HN14] The on-sale bar applies when two conditions are met before the critical date. First, the product must be the subject of a commercial offer for sale. Second, the invention must be ready for patenting. The second condition may be satisfied in at least two ways: by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.

**Civil Procedure: Injunctions: Preliminary & Temporary Injunctions**

[HN15] To obtain the extraordinary relief of a preliminary injunction, the moving party must establish that: (1) it has a reasonable likelihood of succeeding on the merits; (2) it will suffer irreparable harm if the injunction is not granted; (3) the balance of hardships tips in its favor; and (4) an injunction would be consistent with the public interest.

**Patent Law: Remedies: Injunctions**

**Patent Law: Jurisdiction & Review: Standards of Review**

[HN16] To overturn the denial of a preliminary injunction, the patentee must show not only that one or more of the factors relied on by the district court was clearly erroneous, but also that a denial of the preliminary relief sought would amount to an abuse of discretion upon reversal of an erroneous finding.

**Patent Law: Remedies: Injunctions**

[HN17] A patent holder seeking a preliminary injunction bears the burden of establishing a likelihood of success on the merits with respect to the patent's validity.

**Patent Law: Remedies: Injunctions**

**Patent Law: Infringement: Acts of Infringement**

[HN18] The presumption of a patent's validity created by *35 U.S.C.S. § 282* (1994 & Supp. III 1997) does not relieve a patentee who moves for a preliminary injunction from carrying the normal burden of demonstrating that it will likely succeed on all disputed liability issues at trial, even when the issue concerns the patent's validity. If the alleged infringer raises a substantial question concerning validity, i.e., asserts an invalidity defense that the patentee cannot prove lacks substantial merit, the preliminary injunction should not issue.

**Civil Procedure: Injunctions: Preliminary & Temporary Injunctions**

[HN19] A district court may properly deny a motion for preliminary injunction simply based on the movant's failure to establish a reasonable likelihood of success on the merits.

**COUNSEL:** Jack E. Dominik, Dominik, Knechtel, Demeur & Samlan, of Miami Lakes, Florida, argued for plaintiff-appellant.

H. Bissell Carey, III, Robinson & Cole LLP, of Boston, Massachusetts, argued for defendants-appellees.

**JUDGES:** Before RADER, SCHALL, and GAJARSA, Circuit Judges.

**OPINIONBY:** SCHALL

**OPINION:** [\*1341]

SCHALL, Circuit Judge.

Helifix Limited ("Helifix") appeals the order of the United States District Court for the District of Massachusetts denying its motion to preliminarily enjoin Blok-Lok, Ltd. and William Scott Burns n1 (collectively "Blok-Lok") from inducing infringement of, and contributorily infringing, United States Patent No. 5,687,801 ("the '801 patent"). See *Helifix Ltd. v. Blok-Lok, Ltd.*, No. 98-11093 (D. Mass. Dec. 15, 1998) (memorandum and order). Helifix also appeals the district court's interlocutory order granting summary judgment of patent invalidity in favor of Blok-Lok on Blok-Lok's counterclaim against Helifix. n2 The district court held that the '801 patent was invalid by reason of anticipation and the on-sale bar under 35 U.S.C. § 102(b) (1994). See *Helifix Ltd. v. Blok-Lok, Ltd.*, 26 F. Supp. 2d 294, 52 U.S.P.Q.2D (BNA) 1486 (D. Mass. 1998). We affirm the denial of the motion for a preliminary injunction, vacate the grant of summary judgment of patent invalidity, and remand for further proceedings.

-----Footnotes-----

n1 William Scott Burns is the general manager of Blok-Lok, Ltd. and was named as a defendant in Helifix's complaint.

n2 Blok-Lok's Lanham Act counterclaim named as a third-party defendant Helifix North America Corporation, a wholly-owned subsidiary of Helifix.

-----End Footnotes-----

## BACKGROUND

### I.

The '801 patent, entitled "Method of Securing Walls with a Tie," issued from an application filed on September 27, 1996. That application was a divisional of Application Serial No. 08/491,358, filed June 30, 1995, which was a continuation-in-part of Application Serial No. 08/204,465, filed February 28, 1994. The patent names Robert Ian Paterson and Brian Alan Breeze as the inventors and Helifix as the assignee. The patent is directed to a method of securing layers of masonry [\*1342] ("wythes"), such as an exterior brick wall and an interior concrete wall, by means of ties. See, e.g., '801 pat., claim 1. The typical tie is described as spiral-shaped, 7-8 inches long, and made of solid stainless-steel. See id. at col. 2, ll. 55-56, col. 4, l. 42. The sole claim of the patent recites:

1. A method of securing (1) two or more wythes in a building structure (2) utilizing a helical tie member (3) having longitudinal helical flutes terminating at a cutting end at one end and (4) terminating at a remote end opposite the cutting end comprising the steps of:

(5) drilling a first wythe to a diameter less than [sic] a diameter of the flutes on the tie to be inserted,

(6) drilling a pilot hole in a second wythe to a predetermined depth,

(7) inserting the remote end of the tie into a tool which (8) impactingly drives the tie and (9) rotatably permits the same to rotate as a helical bed is developed in the first wythe due to penetration by the tie,

(10) passing the flutes into the second wythe and continuing to impactingly drive the tie to a base of the pilot hole,

(11) removing the driving tool from the remote end of the tie, and thereafter (12) finishing the remote end of the tie in accordance with mandates of the site.

(The reference numerals are those added by the district court in its summary judgment order, see *Helifix*, 26 F. Supp. 2d at 297, 52 U.S.P.Q.2D (BNA) at 1489.) The patent teaches that pursuant to this method "the tie helically grasps the interior wythe . . . as well as the exterior wythe . . . , and a dry fix or tieing [sic] relationship is developed." '801 pat., col. 5, ll. 34-36. The patent states that different tools can be used to drive the tie, "so long as the tie is permitted to rotate," id. at col. 4, l. 51, and that "it is important that the tie be free to rotate in the . . . [tool] to avoid creating any stress in the masonry other than that imparted by the hammering action of the tie," id. at col. 5, ll. 47-52.

Figure 7 of the '801 patent shows a workman 21 practicing the invention of claim 1 by driving a helical tie member 10 into a building structure to secure a first wythe 2 to a second wythe 4:

[SEE FIGURE 7 IN ORIGINAL]

Figure 13 of the patent shows a helical tie member 10 securing wythes 2 and 4 in a building structure:

[SEE FIGURE 13 IN ORIGINAL] [\*1343]

## II.

In January of 1993, representatives of Helifix attended the World of Concrete trade show in Las Vegas, Nevada, where they displayed and distributed a brochure ("the '93 brochure"). The '93 brochure describes Helifix stainless steel ties and their use in masonry refacing and new construction. It also describes the use of the ties in both "DryFix" and "Dry-Chemical Fix" methods of construction. With regard to the ties, the '93 brochure states:

The Helifix tie has a unique design which causes it to auger as it is installed. The tie cuts a helical groove as it corkscrews into the wall ensuring that it bonds securely with most construction materials.

With regard to the DryFix method, which is at issue in this case, the '93 brochure states:

The DryFix technique is used to pin facing material to the backup where the cavity is minimal or non-existent. Ideal for pinning masonry facings or veneers to brick, block, or concrete. Ideal for use in multi-wythe composite walls.

The brochure explains the DryFix method with the following diagrams and descriptions:

1. Having determined the points of entry for the Helifix ties, a hole is drilled through the outer wythe into the backup substrate to a predetermined depth.

[SEE FIGURE 1 IN ORIGINAL]

2. The DryFix masonry tie is loaded into the insertion tool and power driven until the outer end of the tie is recessed below the face of the brickwork.

[SEE FIGURE 2 IN ORIGINAL]  
[\*1344]

3. The outer face is then finished with matching materials.

[SEE FIGURE 3 IN ORIGINAL]

The DryFix portion of the brochure also states that ". . . the special augering action of the tie avoids bricks or blocks splitting . . . ."

The last paragraph of the brochure is a "warranty" that provides as follows:

Seller makes no warranty of any kind, express or implied, except that the goods sold under this agreement shall be of the standard quality of seller, and buyer assumes all risk and liability resulting from the use of the goods, whether used singly or in combination with other goods. Seller neither assumes nor authorizes any person to assume for seller any other liability in connection with the sale or use of the goods sold, and there is no oral agreement or warranty collateral to or affecting this transaction.

The brochure also sets forth a telephone number and address to contact "for further information."

-----Footnotes-----

n3 In the DryFix method, the tie is secured to the wythes without chemicals. In the Dry-Chemical Fix method, a chemical resin secures the tie to the outer wythe.

-----End Footnotes-----

### III.

On June 4, 1998, Helifix filed suit against Blok-Lok, alleging that Blok-Lok was infringing and inducing infringement of the '801 patent, was infringing Helifix's copyrighted catalogues, and was falsely designating the sponsorship of non-Helifix products as Helifix products. Helifix sought a preliminary injunction of the activities alleged to infringe the patent and demanded a jury trial. On July 9, 1998, Blok-Lok filed a counterclaim which included a request for a declaratory judgment of patent invalidity. Blok-Lok asserted that the '93 brochure describes the method claimed in the '801 patent and that the claimed method was on sale at the January 1993 World of Concrete trade show. Because the earliest United States priority date of the '801 patent, the February 28, 1994 filing date of Application Serial No. 08/204,465, was more than one year after the brochure was publicly distributed and more than one year after the trade show, Blok-Lok asserted that the method was unpatentable under 35 U.S.C. § 102(b).

In due course, Helifix moved for summary judgment of patent infringement and Blok-Lok cross-moved for summary judgment [\*1345] of patent invalidity. The district court denied both motions on September 14, 1998. However, after a hearing on September 15, 1998, the court

invited Blok-Lok to renew its motion. Blok-Lok did so, and on November 5, 1998, the court granted the renewed motion for summary judgment in an interlocutory order. See *Helifix*, 26 F. Supp. 2d at 303, 52 U.S.P.Q.2D (BNA) at 1494. In doing so, the court construed claim 1 of the '801 patent, focusing on the tool recited in the claim. See *id.* at 296-98, 52 U.S.P.Q.2D (BNA) at 1488-89. The court concluded that the claim is not limited to the specific tool described in the patent specification. See *id.* at 298, 52 U.S.P.Q.2D (BNA) at 1489. The court then determined that the '801 patent is anticipated by the '93 brochure under 35 U.S.C. § 102(b) and that activities at the World of Concrete trade show in January of 1993 amounted to an on-sale bar under 35 U.S.C. § 102(b). See *id.* at 298-303, 52 U.S.P.Q.2D (BNA) at 1490-93. The court therefore granted Blok-Lok's motion for summary judgment of patent invalidity on an interlocutory basis. n4 See *id.* at 303, 52 U.S.P.Q.2D (BNA) at 1494.

-----Footnotes-----

n4 The ruling was interlocutory because it did not dispose of all of the parties' claims. Specifically, there remained Helifix's copyright and false designation of origin claims and Blok-Lok's correction of inventorship, breach of contract, and Lanham Act claims.

-----End Footnotes-----

On December 15, 1998, the district court denied Helifix's motion to preliminarily enjoin Blok-Lok from inducing infringement of, and contributorily infringing, the '801 patent. See *Helifix*, No. 98-11093, slip op. at 3. The court did so based upon its grant of summary judgment the previous month in favor of Blok-Lok:

It would not be consistent with the court's order of November 5, 1998 . . . to grant plaintiff's motion for preliminary injunction that would prevent the defendants from infringing the '801 patent. That part of plaintiff's motion is denied.

*Id.*

Helifix appeals from the denial of its request for a preliminary injunction and the court's grant of Blok-Lok's motion for summary judgment.

## DISCUSSION

### I.

We have jurisdiction over the appeal of the denial of Helifix's request for a preliminary injunction pursuant to 28 U.S.C. § 1292(c)(1) (1994). [HN1] We exercise our discretion to invoke pendent appellate jurisdiction over the interlocutory grant of summary judgment "because it is 'closely interrelated factually' to the preliminary injunction." *Gerber Garment Tech., Inc. v. Lectra Sys., Inc.*, 916 F.2d 683, 686, 16 U.S.P.Q.2D (BNA) 1436, 1439 (Fed. Cir. 1990) (quoting *Intermedics Infusaid, Inc. v. Regents of the Univ. of Minn.*, 804 F.2d 129, 134, 231 U.S.P.Q. (BNA) 653, 657 (Fed. Cir. 1986)); see also *Clinton v. Jones*, 520 U.S. 681, 707 n.41, 137 L. Ed. 2d 945, 117 S. Ct. 1636 (1997) (approving of the Court of Appeals' invocation of pendent appellate jurisdiction over Jones' cross-appeal because it was "inextricably intertwined" with Clinton's appeal and review of the cross-appeal was "necessary to ensure meaningful review" of the appeal (quoting *Swint v. Chambers County Comm'n*, 514 U.S. 35, 51, 131 L. Ed. 2d 60, 115 S. Ct. 1203 (1995))). As just seen, the

district court based its denial of the preliminary injunction request on its summary judgment ruling in favor of Blok-Lok. See *Helifix*, No. 98-11093, slip op. at 3. Thus, the denial of the preliminary injunction and the grant of summary judgment are "inextricably intertwined."

## II.

We turn first to the summary judgment of patent invalidity because it formed the basis for the district court's denial of Helifix's request for a preliminary injunction. [HN2] We review a grant of summary judgment de novo, and affirm only if, when the facts are viewed in the light most favorable to the non-moving party and all doubts are resolved in favor of the non-movant, there are no genuine issues of [\*1346] material fact and the moving party is entitled to judgment as a matter of law. See *Robotic Vision Sys., Inc. v. View Eng'g, Inc.*, 112 F.3d 1163, 1165, 42 U.S.P.Q.2D (BNA) 1619, 1621 (Fed. Cir. 1997). [HN3] A patent is presumed to be valid, see 35 U.S.C. § 282 (1994), and this presumption only can be overcome by clear and convincing evidence to the contrary. See, e.g., *WMS Gaming Inc. v. International Game Tech.*, 184 F.3d 1339, 1355, 51 U.S.P.Q.2D (BNA) 1385, 1396-97 (Fed. Cir. 1999). To be entitled to summary judgment, therefore, Blok-Lok had to establish that there were no material facts in dispute relating to its assertion of anticipation, and it had to present clear and convincing evidence that the '93 brochure anticipates the claim of the '801 patent. Alternatively, Blok-Lok had to establish that there were no material facts in dispute relating to its assertion of the on-sale bar, and it had to present clear and convincing evidence that the invention claimed in the '801 patent was on sale at the World of Concrete trade show.

### A. Anticipation

[HN4] An invention is anticipated under 35 U.S.C. § 102(b) if it "was . . . described in a printed publication in this . . . country . . . more than one year prior to the date of application for patent in the United States." 35 U.S.C. § 102(b). [HN5] The first step of an anticipation analysis is claim construction. See *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 714, 48 U.S.P.Q.2D (BNA) 1911, 1915 (Fed. Cir. 1998). Claim construction is a question of law that we review de novo. See *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456, 46 U.S.P.Q.2D (BNA) 1169, 1174 (Fed. Cir. 1998) (en banc). [HN6] In construing patent claims, we look to the intrinsic evidence of record--the claims, the specification, and, if in evidence, the prosecution history. See *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582-83, 39 U.S.P.Q.2D (BNA) 1573, 1576-77 (Fed. Cir. 1996). If intrinsic evidence resolves all ambiguities, extrinsic evidence is not considered. See *id.*

1. The district court construed the claim of the '801 patent as not requiring the specific tool described in the patent specification, a hammer drilling machine fitted with an SDS chuck. See *Helifix*, 26 F. Supp. 2d at 298, 52 U.S.P.Q.2D (BNA) at 1489. We see no error in that construction. The claim of the '801 patent does not limit the method to a hammer drilling machine fitted with an SDS chuck, but recites a tool into which a tie can be inserted and that "impactingly drives the tie and rotatably permits the same to rotate . . ." '801 pat., claim 1. The specification itself teaches that different tools can be used "so long as the tie is permitted to rotate." *Id.* at col. 4, ll. 46-51. The prosecution history reveals that the Patent Office determined that the method could be practiced without the specific tool described in the specification, and there is no indication that Helifix challenged that determination.

2. [HN7] The second step in an anticipation analysis involves a comparison of the construed claim to the prior art. See *Key Pharms.*, 161 F.3d at 714, 48 U.S.P.Q.2D (BNA) at 1915. To be anticipating, a prior art reference must disclose "each and every limitation of the claimed invention[.] . . . must be enabling[,] and [must] describe . . . [the] claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *In re Paulsen*, 30 F.3d 1475, 1478-79; 31 U.S.P.Q.2D (BNA) 1671, 1673 (Fed. Cir. 1994). If there is a genuine issue of material fact relevant to any one of these factors, summary judgment is not proper.

Helifix acknowledges that the '93 brochure was publicly distributed at the World of Concrete trade show more than one year before the earliest United States priority date for the '801 patent. It also acknowledges that the brochure teaches elements (1) - (7) and (11) and (12) of the '801 patent claim, as numbered by the district court. It argues, however, that the '93 brochure does not teach elements (8) - (10) of the claim. Specifically, it asserts that the brochure does not teach that the tool "impactingly drives the tie and [\*1347]rotatably permits the same to rotate." '801 pat., claim 1.

The '93 brochure does not expressly disclose in words elements (8)-(10) of claim 1 of the '801 patent. The brochure might nevertheless be anticipating if a person of ordinary skill in the art would understand the brochure as disclosing elements (8)-(10) and if such a person could have combined the brochure's description of the invention with his own knowledge to make the claimed invention. See *In re Donohue*, 766 F.2d 531, 533, 226 U.S.P.Q. (BNA) 619, 621 (Fed. Cir. 1985).

The district court assumed that because a person of ordinary skill in the art is deemed to be aware of all relevant prior art, see *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962, 1 U.S.P.Q.2D (BNA) 1196, 1201 (Fed. Cir. 1986), such a person must be someone who is familiar with the pertinent literature and who is likely to attend trade shows. See *Helifix*, 26 F. Supp. 2d at 299, 52 U.S.P.Q.2D (BNA) at 1490-91. From that, the court reasoned that a person of ordinary skill in the art of the '801 patent would be a building reinforcement crew supervisor or a person in research and development. See *id.* The court determined that such a person would realize that putting a rotational force on the tie depicted in the '93 brochure would create a hole in the masonry of the same size as the tie, and, therefore, would prevent the tie from adhering to the masonry. See *id.* at 300, 52 U.S.P.Q.2D (BNA) at 1491. The court therefore concluded that the '93 brochure plainly conveyed to one of ordinary skill in the art, through the chevron symbol in figure 2 of the DryFix portion of the brochure, the absence of any symbol or words describing a rotational force, and statements in the brochure about the augering action of the tie, that an impacting force, and not a rotational force, is applied to the tie. See *id.* The court thus concluded that the '93 brochure taught elements (8) - (10) of the patent claim. See *id.*

The district court should not have constructed the hypothetical person of ordinary skill in the art by determining which persons working in the field of the invention are likely to be familiar with the relevant literature. Instead, [HN8] the court should have considered the educational level of the inventor; the type of problems encountered in the art; the prior art solutions to those problems; the rapidity with which innovations are made; the sophistication of the technology, and the educational level of workers in the field. See *Custom Accessories*, 807 F.2d at 962, 1 U.S.P.Q.2D (BNA) at 1201.

Moreover, neither Helifix nor Blok-Lok presented evidence on how a person of ordinary skill in the art would understand the '93 brochure. The only evidence of record relating to the meaning of the brochure is the testimony of Mr. Paterson, who is both an author of the brochure and an inventor of the claimed method. However, Mr. Paterson testified mainly as to what he intended to convey by the terms used in the brochure; he did not testify as to how a person of ordinary skill in the art would understand the brochure. In any event, Mr. Paterson's testimony is conflicting. On the one hand, he stated that he intended the chevrons in the figure of step two of the DryFix portion of the brochure to indicate "a hammering action." See Tr. of Sept. 15, 1998 Hr'g, at 120-21. He also stated, however, that the '93 brochure does not state that the tie is inserted into the wythe with an impacting action, and that "most people" assume that the tool shown in the brochure places a rotating force on the tie. See *id.* at 125-26. In short, on the record before us, there is a genuine issue of material fact as to whether the '93 brochure discloses elements (8) - (10) of the patent claim.

3. [HN9] "Even if the claimed invention is disclosed in a printed publication, that disclosure will not suffice as prior art if it was not enabling." *Donohoe*, 766 F.2d at 533, 226 U.S.P.Q. (BNA) at 621. Helifix argues that the '93 brochure does not enable a tool capable of practicing the method recited in the patent and that such a tool was [\*1348] not available at the time of the World of Concrete trade show. In making this argument, it points to the testimony of Mr. Paterson that Helifix had a difficult time developing a tool that would be useful at worksites, see Tr. of Sept. 15, 1998 Hrg, at 26-27, and that the invention still was in development at the time of the trade show, see id. at 304-06. In addition, Helifix presented a July 29, 1994 document that, according to Helifix, demonstrates that Blok-Lok had returned 44 tools to Helifix because they were unsatisfactory.

We conclude, on the record before us, that Blok-Lok failed to provide clear and convincing evidence that the '93 brochure enables a person of ordinary skill in the art to practice the claimed method. In particular, Blok-Lok did not present any evidence indicating that a person of ordinary skill in the art could have made or obtained a tool capable of being used in the claimed method without an undue amount of experimentation. See *In re Sheppard*, 52 C.C.P.A. 859, 339 F.2d 238, 242, 144 U.S.P.Q. (BNA) 42, 45 (CCPA 1981) (reversing a rejection under 35 U.S.C. § 102(b) where the asserted prior art reference did not permit someone skilled in the art to possess the claimed invention without an undue amount of experimentation).

Although the '93 brochure does not describe the tool used to perform the DryFix method, the district court determined that such a tool was enabled because the Patent Office had issued a restriction requirement between the claimed method and the specific tool described in the specification. See *Helifix*, 26 F. Supp. 2d at 300-301, 52 U.S.P.Q.2D (BNA) at 1491-92. [HN10] The Patent Office can issue a restriction requirement if it finds that two or more inventions claimed in a patent application are "independent and distinct." 35 U.S.C. § 121 (1994). [HN11] A process and apparatus (tool) for its practice can be restricted if either "the process as claimed can be practiced by another materially different apparatus or by hand" or "the apparatus as claimed can be used to practice another and materially different process." Man. Pat. Examining Proc. § 806.05(e) (7th ed. 1998). [HN12] In response to a restriction requirement, an applicant must elect one invention for examination. See 37 C.F.R. § 1.142(a) (1999). Claims to the non-elected invention(s) are withdrawn from consideration and must be canceled before the application is allowed to issue as a patent. See 37 C.F.R. § 1.142(b) (1999).

The grandparent of the '801 patent, Application Serial No. 08/204,465, was filed with claim 1 to a method of securing wythes with a helical tie, claim 2 to a tool for driving a helical tie into a wall, and claims 3 and 4 to helical ties. The Patent Office issued a restriction requirement between the method, tool, and tie claims. With respect to the method and tool claims, the Patent Office asserted that the tool is not required to insert the tie. Helifix did not present any substantive arguments in response to this restriction requirement, and elected to pursue the method claim. In due course, the grandparent application was abandoned in favor of the parent application of the '801 patent, U.S. Application Serial No. 08/491,358. The parent application was filed with claim 1 to the method, claims 2 and 5-7 to the tool, and claims 3 and 4 to the helical tie. The Patent Office issued a restriction requirement along the same lines as the restriction requirement issued in the grandparent application, again asserting that the tool is not required to insert the tie. Helifix did not present any substantive arguments in response to this restriction requirement, and elected to pursue the tool claims. The '801 patent application was filed with the same claims as the parent application; however, the tool claims were canceled in a preliminary amendment, and the tie claims were canceled pursuant to a telephone conference with the examiner. Accordingly, the patent issued with only method claim 1.

Blok-Lok argued before the district court that the Patent Office's repeated assertions that the tool claimed in the patent applications is not required to insert the tie demonstrate that

the '93 brochure need [\*1349] not describe the tool in order to enable the claimed method. The district court interpreted the restriction requirements as reflecting the Patent Office's determinations that other tools could be devised to practice the method of the '801 patent. See *Helifix*, 26 F. Supp. 2d at 300-01, 52 U.S.P.Q.2D (BNA) at 1491-92. Both Blok-Lok and the district court, however, have read too much into the restriction requirements in this case. The restriction requirements at issue merely reflect the Patent Office's conclusions that claim 1, by its terms, is not limited to a method using the tool recited in claim 2. Accordingly, the restriction requirements between the method claimed in the '801 patent and the specific tool described in the specification in no way bear on the enablement of a different tool. Because Blok-Lok did not present any other evidence indicating that the '93 brochure enables the claimed method, on the record before us there is not clear and convincing evidence that the '93 brochure anticipates the claim of the '801 patent.

#### B. The on-sale bar

[HN13] Under 35 U.S.C. § 102(b), a patent is invalid by reason of the on-sale bar if "the invention was . . . on sale in this country . . . more than one year prior to the date of application for the patent in the United States." 35 U.S.C. § 102(b). In *Pfaff v. Wells Electronics, Inc.*, 525 U.S. 55, 119 S. Ct. 304, 142 L. Ed. 2d 261 (1998), the Supreme Court held that [HN14] the on-sale bar applies when two conditions are met before the critical date, which in this case is February 28, 1994. First, "the product must be the subject of a commercial offer for sale." *Id.* at 67, 119 S. Ct. at 311. Second, "the invention must be ready for patenting." *Id.* at 67, 119 S. Ct. at 312. The Court explained that the second condition may be satisfied in at least two ways: "by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention." *Id.* at 67, 119 S. Ct. at 312 (footnote omitted).

At the time the district court ruled on Blok-Lok's motion for summary judgment, the Supreme Court had not yet decided Pfaff. In concluding that the on-sale bar applied, the court started from the premise that the invention of the '801 patent was set forth in the '93 brochure. See *Helifix*, 26 F. Supp. 2d at 302, 52 U.S.P.Q.2D (BNA) at 1493. Turning to the on-sale issue, the court stated that the '93 brochure provided "very strong circumstantial evidence that the 'DryFix' method was being made available for sale" in January of 1993 at the World of Concrete trade show. *Id.*, 52 U.S.P.Q.2D (BNA) at 1492. The court further stated that nothing in the '93 brochure indicated that the methods, tools, and apparatus described in the brochure were unavailable for sale, and it noted that a statement on the back of the brochure that "Helifix ties have been subjected to extensive testing in a wide range of materials" was an indication that the product that was the subject of the brochure was ready for sale. *Id.*, 52 U.S.P.Q.2D (BNA) at 1492-93. The court also noted that there was a warranty on the back of the brochure. See *id.*, 52 U.S.P.Q.2D (BNA) at 1493. The court reasoned that, if the brochure "did not constitute an offer to sell or at least an indication that the products and methods described were available for sale, this warranty would be very odd indeed." *Id.* Finally, the district court took note of the "admission of the Helifix employees who were present at the World of Concrete trade show that they distributed and displayed" the brochure. *Id.* Under all of these circumstances, the court concluded that Blok-Lok had made out a prima facie case that the method embodied in claim 1 of the '801 patent was on-sale for purposes of section 102(b). See 26 F. Supp. 2d at 302-03, 52 U.S.P.Q.2D (BNA) at 1493-94.

If, in this case, there is a genuine issue of material fact relating to either of the two Pfaff conditions (first, the product or method of the invention being on-sale, and second, the invention being ready for [\*1350] patenting), summary judgment was not proper. We conclude that summary judgment was improper because there is a genuine issue of material fact as to whether the method claimed in the '801 patent was ready for patenting at the time of the January 1993 World of Concrete trade show.

As discussed above, there are genuine issues of material fact as to whether the '93 brochure discloses and enables each element of the method claimed in the '801 patent. Accordingly, for purposes of summary judgment, the '93 brochure cannot be relied upon as an enabling description of the invention. Moreover, in the district court, Blok-Lok failed to allege that any other item provided a description of the invention that was "sufficiently specific to enable a person skilled in the art to practice the invention." Blok-Lok's ability to prevail on the issue of whether the invention of the '801 patent was ready for patenting at the time of the trade show thus depends on its being able to establish that there are no genuine issues of material fact as to whether, at the time of the show, the method of claim 1 had been reduced to practice. This question turns on whether a tool capable of practicing the method had been developed in January of 1993. See *Robotic Vision*, 112 F.3d at 1165, 42 U.S.P.Q.2D (BNA) at 1624 (determining that a method that required a software program could not have been on-sale before a suitable software program had been developed even though the claims did not recite the software program).

We note first that reduction to practice of the claimed method does not require reduction to practice of the specific tool described in the '801 patent, but merely requires the development of any tool that meets the limitations recited in the claim. Thus, to establish that the method had been reduced to practice at the time of the World of Concrete trade show, Blok-Lok had to prove that Helifix had a tool into which a tie could be inserted and that would "impactingly drive the tie and rotatably permit the same to rotate as a helical bed is developed in the first wythe due to penetration by the tie." '801 pat., claim 1. On appeal, Blok-Lok points to the deposition testimony of Mr. Sweeney to the effect that a DryFix tool was available and on sale prior to the trade show. However, Mr. Sweeney did not testify about the characteristics of the DryFix tool in question. Accordingly, this testimony does not demonstrate that the tool could meet the limitations recited in the '801 patent claim. Blok-Lok also cites letters that mention DryFix tools, but these letters similarly fail to indicate the characteristics and capabilities of the tools. Mr. Paterson testified in a deposition that there were many tools that had been called "DryFix tools" and that those tools may not have borne any resemblance to the final tool described in the patent. Thus, there is a genuine issue of material fact as to whether a tool meeting the claim limitations had been developed at the time of the trade show, and, therefore, whether the invention had been reduced to practice so that it could have been "on sale" at that time.

Because we conclude, on the record before us, that there are genuine issues of material fact with respect to the issues of anticipation and the on-sale bar, we vacate the grant of summary judgment of patent invalidity. In doing so, we do not imply that the record supports a determination that the '801 patent is valid, or that summary judgment of patent invalidity on a more fully developed record would be improper. We merely hold, that, on the record before the district court, Blok-Lok did not establish its entitlement to summary judgment.

### III.

We turn next to the denial of the preliminary injunction. [HN15] To obtain the extraordinary relief of a preliminary injunction, the moving party must establish that: (1) it has a reasonable likelihood of succeeding on the merits; (2) it will suffer irreparable harm if the injunction is not granted; (3) the balance of hardships tips in its favor; and (4) an injunction would be [\*1351]consistent with the public interest. See, e.g., *Nutrition 21 v. United States*, 930 F.2d 867, 869, 18 U.S.P.Q.2D (BNA) 1347, 1348-49 (Fed. Cir. 1991). [HN16] To overturn the denial of a preliminary injunction, the patentee "must show not only that one or more of the factors relied on by the district court was clearly erroneous, but also that a denial of the preliminary relief sought would amount to an abuse of discretion upon reversal of an erroneous finding." *New England Braiding Co. v. A.W. Chesterton Co.*, 970 F.2d 878, 882, 23 U.S.P.Q.2D (BNA) 1622, 1625 (Fed. Cir. 1992). Helifix has not met this burden.

[HN17] A patent holder seeking a preliminary injunction bears the burden of establishing a likelihood of success on the merits with respect to the patent's validity. See *Nutrition 21*, 930 F.2d at 869, 18 U.S.P.Q.2D (BNA) at 1349. [HN18] The presumption of the patent's validity created by 35 U.S.C. § 282 (1994 & Supp. III 1997) "does not relieve a patentee who moves for a preliminary injunction from carrying the normal burden of demonstrating that it will likely succeed on all disputed liability issues at trial, even when the issue concerns the patent's validity." *New England Braiding*, 970 F.2d at 882, 23 U.S.P.Q.2D (BNA) at 1625. If the alleged infringer raises a substantial question concerning validity, i.e., asserts an invalidity defense that the patentee cannot prove "lacks substantial merit," the preliminary injunction should not issue. *Genentech, Inc. v. Novo Nordisk*, 108 F.3d 1361, 1364, 42 U.S.P.Q.2D (BNA) 1001, 1003 (Fed. Cir. 1997).

The district court denied Helifix's preliminary injunction motion because it would have been inconsistent with its summary judgment of patent invalidity. See Helifix, No. 98-11093, slip op. at 3. Having determined that the '801 patent was invalid, the district court presumably concluded that Helifix would not be able to establish a likelihood of success on the merits. The district court did not consider the issues of irreparable harm, the balance of hardships, or whether an injunction would be consistent with the public interest.

As discussed above, we conclude that the district court erred in granting Blok-Lok's motion for summary judgment. At the same time, we cannot say that, based upon the record before it, the district court abused its discretion in denying Helifix's request for a preliminary injunction. Because an alleged infringer must establish by clear and convincing evidence that a patent is invalid, Helifix has been able to show on appeal that genuine issues of material fact bar entry of summary judgment in favor of Blok-Lok. However, Helifix has not been able to establish that Blok-Lok's validity defense "lacks substantial merit."

Blok-Lok argues that the '801 patent is invalid by reason of anticipation and the on-sale bar. As noted above, Helifix acknowledges that the '93 brochure teaches elements (1) - (7) and (11) and (12) of claim 1 of the '801 patent. As far as elements (8) - (10) are concerned, the drawing of the brochure with a chevron and the equivocal testimony of Mr. Paterson make it a very open question as to whether those elements are or are not disclosed in the brochure. If they are, then claim 1 is anticipated by the brochure.

Turning to the on-sale bar question, we have vacated the district court's grant of summary judgment in favor of Blok-Lok because we have concluded that there are genuine issues of material fact relating to the second Pfaff condition: whether the invention of the '801 patent was ready for patenting at the time it allegedly was on sale. We have come to that conclusion based largely upon the conflicting testimony of Mr. Sweeny, on behalf of Blok-Lok, and Mr. Paterson, on behalf of Helifix. In our analysis of the on-sale bar issue, we did not discuss the first Pfaff condition: whether the product at issue was the subject of a commercial offer for sale. We point out at this juncture, however, that the evidence on this point can fairly be said to be very much in equipoise. On the one hand, Mr. Paterson admitted that Helifix attended the World of Concrete trade [\*1352] show for "commercial purposes," Tr. of Sept. 15, 1998 Hrg, at 130, and that the '93 brochure was distributed at the trade show to interest potential customers in purchasing the described products for use in the described methods. On the other hand, Mr. Paterson testified that the DryFix method was included in the brochure only "as a teaser," id. at 128, that the method "primarily promoted [at the trade show] was the dry chemical fix method," id. at 130, and that no price list was distributed at the trade show.

In sum, although the record before us does not support the district court's grant of summary judgment, it does raise a substantial question of patent invalidity. For that reason, we see no clear error in the finding of the district court that, in the face of Blok-Lok's challenge to the validity of the '801 patent, Helifix could not establish a likelihood of success on the merits. Under these circumstances, it was not necessary for the court to consider the remaining preliminary injunction factors. See *Reebok Int'l Ltd. v. J. Baker Inc.*, 32 F.3d 1552,

*1556, 31 U.S.P.Q.2D (BNA) 1781, 1784 (Fed. Cir. 1994)* [HN19] ("[A] district court may properly deny a motion for preliminary injunction simply based on the movant's failure to establish a reasonable likelihood of success on the merits."). We therefore find no abuse of discretion in the district court's denial of Helifix's request for a preliminary injunction.

#### **CONCLUSION**

We affirm the denial of Helifix's request for a preliminary injunction, vacate the interlocutory summary judgment of patent invalidity, and remand the case for further proceedings consistent with this opinion.

#### **AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED**

#### **COSTS**

Each party shall bear its own costs.

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CELERITAS TECHNOLOGIES, LTD., Plaintiff/Cross-Appellant, v.ROCKWELL  
INTERNATIONAL CORPORATION, Defendant-Appellant,  
97-1512, 97-1542

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

150 F.3d 1354; 1998 U.S. App. LEXIS 16451; 47 U.S.P.Q.2D(BNA) 1516

July 20, 1998, Decided

**SUBSEQUENT HISTORY:** Rehearing Denied September 14, 1998, Reported at: 1998 U.S. App. LEXIS 24391. Rehearing Denied and In Banc Suggestion Declined September 14, 1998, Reported at: 1998 U.S. App. LEXIS 24392. Certiorari Denied January 19, 1999, Reported at: 1999 U.S. LEXIS 625.

**PRIOR HISTORY:**Appealed from: United States District Court for the Central District of California. Senior Judge Edward Rafeedie.

**DISPOSITION:** AFFIRMED-IN-PART and REVERSED-IN-PART.

**CASE SUMMARY:**

**PROCEDURAL POSTURE:** Defendant manufacturer appealed from the judgment of the United States District Court for the Central District of California, which denied its motions for judgment as a matter of law and for a new trial following a jury verdict in favor of plaintiff patent holder in the patent holder's action for breach of contract, misappropriation of trade secrets, and patent infringement. The patent holder cross-appealed from the damage award.

**OVERVIEW:** The manufacturer and the patent holder entered into an agreement providing that the manufacturer was not to disclose or use any information regarding the patent. After the manufacturer informed the patent holder that it would not license the use of the patent's technology, the manufacturer then began to develop a project incorporating the patent's technology. The patent holder filed an action for breach of contract, misappropriation of trade secrets, and patent infringement. On appeal from a verdict in the patent holder's favor, the court held that: (1) the district court properly denied the manufacturer judgment as a matter of law on liability and for a new trial on damages because the jury's verdict was supported by substantial evidence and the theories of recovery were not legally unsound; (2) the district court properly awarded the patent holder damages only on its breach of contract claim because it had stipulated that it would accept the highest award under the three theories of recovery; (3) the claims of the patent were anticipated by a published article, and the patent therefore was invalid; and (4) the award of attorney fees was reversed because the patent was invalid.

**OUTCOME:** The court affirmed the district court's denial of the manufacturer's motion for judgment as matter of law on liability and for a new trial on damages. The court reversed the district court's denial of the manufacturer's motion for judgment as a matter of law as to the patent infringement claim. The court also reversed the district court's award of attorney fees to the patent holder.

**CORE TERMS:** signal, modem, technology, de-emphasis, patent, single-carrier, proprietary, breach of contract, public domain, misappropriation, disclose, substantial evidence, cellular, new trial, invention, readily ascertainable, pre-emphasis, simulated, carrier, trade secret, amplitude, limiter, analog, patent infringement, radio transmitter, trade secrets, damage award, anticipated, engineer, lump-sum

**LexisNexis(R) Headnotes**

**Civil Procedure: Trials: Judgment as Matter of Law**

[HN1] On appeal from a judgment denying a motion for judgment as a matter of law, an appellate court reapplyes the standards used by the district court in ruling on the motion. Following a jury trial, an appellant must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusions implied from the jury's verdict cannot in law be supported by those findings.

**Civil Procedure: Trials: Judgment as Matter of Law**

**Civil Procedure: Appeals: Standards of Review: Abuse of Discretion**

[HN2] An appellate court reviews the denial of a motion for a new trial for an abuse of discretion.

#### Contracts Law: Remedies

[HN3] Damages for breach of contract must be clearly ascertainable. However, where the fact of damage has been established, the precise amount of the damage need not be calculated with absolute certainty. As long as there is available a satisfactory method for obtaining a reasonably proximate estimation of the damages, the defendant whose wrongful act gave rise to the injury will not be heard to complain that the amount thereof cannot be determined with mathematical precision.

#### Patent Law: Novelty & Anticipation

[HN4] A claim is anticipated if each and every limitation is found either expressly or inherently in a single prior art reference. A reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. Thus, the question whether a reference "teaches away" from the invention is inapplicable to an anticipation analysis.

**COUNSEL:** Frederick A. Lorig, Bright & Lorig, of Los Angeles, California, and Rory J. Radding, Pennie & Edmonds, LLP, of New York, New York, argued for plaintiff-cross appellant. With them on the brief were Patrick F. Bright and Bruce R. Zisser, Bright & Lorig. Of counsel on the brief was Robert A. Appleby, Pennie & Edmonds LLP.

Richard S. Florsheim, Foley & Lardner, of Milwaukee, Wisconsin, argued for defendant-appellant. With him on the brief was Brian J. McNamara and Lawrence M. Sung, Foley & Lardner, of Washington, DC. Of counsel on the brief was Mark A. Flagel, Latham & Watkins, of Los Angeles, California.

**JUDGES:** Before MAYER, Chief Judge, MICHEL and LOURIE, Circuit Judges.

**OPINIONBY:** LOURIE

**OPINION:**

[\*1355] LOURIE, Circuit Judge.

Rockwell International Corporation appeals from the decision of the United States District Court for the Central District of California denying Rockwell's motions for judgment as a matter of law and for a new trial following a jury verdict that Rockwell [\*1356] willfully infringed Celeritas Technologies, Ltd.'s patent, misappropriated its trade secrets, and breached a non-disclosure agreement relating to the protected subject matter. See Celeritas Techs., Ltd v. Rockwell Int'l Corp., 95-CV-6371 (May 30, 1997). Because substantial evidence supports the jury's verdict on the contract claim, we affirm the court's ruling with regard to both liability and damages on that claim. Because the claims of the patent have been shown to be anticipated as a matter of law, we reverse the denial of Rockwell's motion for JMOL regarding patent validity and direct entry of judgment for Rockwell on the patent claim.

Celeritas cross-appeals from the judgment, arguing that the district court should have added exemplary damages for misappropriation to the contract damages award. Because the district court did not err in determining that a stipulation precluded a recovery on more than one claim, we affirm the entry of judgment solely on the contract claim.

#### BACKGROUND

On July 28, 1993, Michael Dolan filed a patent application for an apparatus for increasing the rate of data transmission over analog cellular telephone networks. The resulting patent, U.S. Patent 5,386,590, assigned to Celeritas, issued on January 31, 1995 with two claims.

As described in the patent, a conventional analog cellular communications system suffers from noise that the listener hears as a high frequency hiss. Analog cellular networks combat this noise by boosting the high frequency components of the transmitted signal (typically a speaker's voice) and then decreasing these components at the receiving end. From the listener's perspective, this pre-emphasis at the transmit end and de-emphasis at the receiving end has minimal effect on the sound of a speaker's voice. The de-emphasis on the receiving end, however, reduces the high frequency hiss and therefore increases the fidelity of the cellular communications channel.

A limiter circuit then "clips" the top of signals having high amplitudes so that the transmitted signal stays within an established range. The combined effect of the pre-emphasis and limiter circuits is substantially imperceptible in voice communication; however, it significantly impairs the transmission of data across the network.

The claimed invention overcomes the problem of distortion induced by the pre-emphasis and limiter circuits found in conventional analog cellular communications systems. The patent claims an apparatus that counteracts the adverse effects of the pre-emphasis and limiter circuits by de-emphasizing the data signal before presenting it to the cellular network. Claim 2, which is representative, reads as follows:

An apparatus for increasing the data output rate from a transmit modem in a duplex analog radio communication system having a single-carrier data signal, comprising:

a radio transmitter which receives said single-carrier data signal, said radio transmitter including a pre-emphasizer that increases the amplitudes of components of said single-carrier data signal in the range of 1,000 Hz to 3,000 Hz, said radio transmitter further including a limiter that limits the amplitudes of said single-carrier data signal;

a transmit modem which provides said single-carrier data signal as an input signal to said radio transmitter, said transmit modem encoding digital data onto said input signal as a plurality of modulation signal components, said transmit modem including a spectral shaper which selectively reduces amplitudes of said modulation signal components at higher frequencies to cause said input signal from said modem to said radio transmitter to have lower amplitudes at higher frequencies than at lower frequencies to reduce the effect of said limiter on said input signal.

The spectral shaper recited in the claim performs the de-emphasis function.

In September 1993, Dolan and other officials of Celeritas met with representatives from Rockwell to demonstrate their proprietary de-emphasis technology. Rockwell is the leading manufacturer of modem "chip sets" which contain the core functions of [\*1357] commercial modems, including the modulation function where de-emphasis is performed. The parties entered into a non-disclosure agreement (NDA), which covered the subject matter of the meeting and provided in pertinent part that Rockwell "shall not disclose or use any Proprietary Information (or any derivative thereof) except for the purpose of evaluating the prospective business arrangements between Celeritas and Rockwell."

The agreement provided that proprietary information "shall not include information which . . . was in the public domain on the date hereof or comes into the public domain other than through the fault or negligence of [Rockwell]." Furthermore, the agreement contained the following paragraph:

**Injunctive Relief.** Celeritas and Rockwell acknowledge that the extent of damages in the event of the breach of any provision of this Agreement would be difficult or impossible to ascertain, and that there will be available no adequate remedy at law in the event of any such breach. Each party therefore agrees that in the event it breaches any provision of this

Agreement, the other party will be entitled to injunctive or other equitable relief, in addition to any other relief to which it may be entitled. The parties hereby waive any requirement for the posting of a bond or other security in connection with the granting of injunctive relief.

In March 1994, AT&T Paradyne began to sell a modem that incorporated de-emphasis technology. In that same month, Rockwell informed Celeritas that it would not license the use of Celeritas's proprietary technology, and concurrently began a development project to incorporate de-emphasis technology into its modem chip sets. Significantly, Rockwell did not independently develop its own de-emphasis technology, but instead assigned the same engineers who had learned of Celeritas's technology under the NDA to work on the de-emphasis development project. In January 1995, Rockwell began shipping its first prototype chip sets that contained de-emphasis technology. By the time of trial in 1997, Rockwell's sales were surpassing its projections.

On September 22, 1995, Celeritas sued Rockwell, alleging breach of contract, misappropriation of trade secrets, and patent infringement. In order to simplify the trial and avoid a duplicative recovery, Celeritas stipulated that it would accept the highest award under the three independent theories. The jury returned a verdict for Celeritas on each of the three theories, awarding Celeritas \$57,658,000 each on the patent infringement and breach of contract claims, and \$26,850,000 each in compensatory and exemplary damages on the trade secret misappropriation claim. The contract and patent infringement damages were based on a hypothetical lump-sum paid-up license for the use of the proprietary technology in Rockwell's products. The misappropriation damages were based on a finding that Celeritas's proprietary technology gave Rockwell a twenty-one month "head start" in its product development. After Rockwell moved for JMOL on liability and for a new trial on damages, the court concluded that the patent infringement award erroneously included a royalty on post-judgment sales; the parties then agreed to a remittitur that reduced the award to \$17,484,160, which was doubled to \$34,968,320 in light of a finding of willful infringement. That award reflected multiplying a royalty rate by Rockwell's own 1994 projections of estimated sales through the last day of trial.

The court then entered judgment awarding Celeritas \$57,658,000 for breach of contract, \$85,820.05 in costs, and \$900,000 in attorney fees under 35 U.S.C. § 285 (1994) (court may award prevailing party attorney fees in an exceptional patent case). The court denied Rockwell's remaining motions. Rockwell now appeals and Celeritas cross-appeals to this court. We have jurisdiction under 28 U.S.C. § 1295(a)(1) (1994).

## DISCUSSION

[HN1] On appeal from a judgment denying a motion for JMOL, we reapply the standards used by the district court in ruling on the motion. See *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454, 46 U.S.P.Q.2D (BNA) 1169, 1173 (Fed. Cir. 1998) (in banc); *Garter-Bare Co. v. Munsingwear, Inc.*, 723 F.2d 707, 709, [\*1358]221 U.S.P.Q. (BNA) 751, 752 (9th Cir. 1984). Following a jury trial, an appellant "must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied from the jury's verdict cannot in law be supported by those findings." *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893, 221 U.S.P.Q. (BNA) 669, 673 (Fed. Cir. 1984) (citation omitted). [HN2] We review the denial of a motion for a new trial for an abuse of discretion. See *DMI, Inc. v. Deere & Co.*, 802 F.2d 421, 427, 231 U.S.P.Q. (BNA) 276, 280 (Fed. Cir. 1986); *Landes Constr. Co. v. Royal Bank of Canada*, 833 F.2d 1365, 1371 (9th Cir. 1987).

### A. Breach of the NDA

Rockwell first argues that the district court erred by denying its motion for JMOL on the breach of contract claim. Citing the prior art submitted to the United States Patent and

Trademark Office (PTO) by Celeritas, Rockwell argues that the evidence at trial clearly demonstrates that the de-emphasis technology disclosed to Rockwell was already in the public domain. Even if the technology were proprietary at the time of disclosure, Rockwell argues, the technology had entered the public domain before Rockwell used it, concededly no later than March 1994. Specifically, Rockwell asserts that AT&T Paradyne had already placed the technology in the public domain through the sale of a modem incorporating de-emphasis technology ("the modem"). Rockwell asserts that the technology was "readily ascertainable" because any competent engineer could have reverse engineered the modem. Rockwell further argues that any confidentiality obligation under the NDA regarding de-emphasis technology was extinguished once the '590 patent issued in January 1995.

Celeritas responds that substantial evidence supports the jury's verdict that Rockwell used its proprietary information. Celeritas argues that in order for a trade secret to enter the public domain in California, it must actually have been ascertained by proper means, and not merely have been ascertainable. Celeritas maintains that, in any event, the only evidence at trial supports the jury's implicit finding that the information was not readily ascertainable from inspection of the modem. Celeritas also argues that the issuance of its patent in 1995 is immaterial because Rockwell had already breached the agreement by using its proprietary information in 1994.

We agree with Celeritas that substantial evidence supports the jury's conclusion that Rockwell breached the NDA. The jury implicitly found that the information given to Rockwell by Celeritas was proprietary. See *Perkin-Elmer Corp.*, 732 F.2d at 893, 221 U.S.P.Q. (BNA) at 672-73 (stating that "the law presumes the existence of findings necessary to support the verdict the jury reached"). Unrebutted testimony established that Celeritas disclosed to Rockwell implementation details and techniques that went beyond the information disclosed in the patent. Thus, even if every detail disclosed in the patent were in the prior art, a fact never alleged by Rockwell, that fact would not undermine the jury's conclusion that Celeritas revealed proprietary information to Rockwell which it then used in developing its modem chip sets. Accordingly, Rockwell's reliance on the prosecution history of the '590 patent and the prior art submitted to the PTO is misplaced.

The jury also implicitly found that the technology had not been placed in the public domain by the sale of the modem. California law appears somewhat unsettled regarding whether a trade secret enters the public domain when it is "readily ascertainable" or whether it must also be "actually ascertained" by the public. Compare *ABBA Rubber Co. v. Seaquist*, 235 Cal. App. 3d 1, 286 Cal. Rptr. 518 (1991) (holding that a trade secret is protectable if it has not yet been ascertained by others) with *American Paper & Packaging Products, Inc. v. Kirgan*, 183 Cal. App. 3d 1318, 228 Cal. Rptr. 713 (1986) (suggesting that a trade secret is not protectable if readily ascertainable by others). Because the judgment is supportable under either standard, we need not attempt to resolve this issue of state law. Suffice it to say that substantial evidence supports a finding that the technology implementing the de-emphasis function in the modem was not "readily ascertainable." In fact, Dolan's testimony, the only evidence cited by Rockwell, [\*1359] belies its contentions. In the very passage cited by Rockwell, Dolan stated that (1) a spectrum analyzer would be needed to discover the de-emphasis technology, (2) most engineers that he talked to did not have spectrum analyzers, and (3) only if an engineer had a spectrum analyzer and knew what to look for could the engineer discover that the modem had de-emphasis technology. His express caveat that the use of de-emphasis could have been discovered if it was being affirmatively pursued is not an admission that the technology would be "readily ascertainable." Because substantial evidence supports the conclusion that the information disclosed to Rockwell had not entered the public domain before its unauthorized use by Rockwell, the court did not err in denying Rockwell's motion for JMOL regarding its breach of the NDA.

#### B. Damages for breach of the NDA

Rockwell argues that the jury's damage award is not sustainable under California contract law and therefore that the district court abused its discretion by not ordering a new trial on contract damages. According to Rockwell a new trial is justified because (1) the contract expressly excludes damages based on a royalty bearing agreement, (2) the damage award is not directly related to any harm caused by the breach, and (3) Rockwell's liability for breach ended once the information entered the public domain.

Rockwell's first argument is without merit. The contract expressly provides that because damages may be difficult to calculate, injunctive relief is available. It does not preclude an award of damages. The clause providing for injunctive relief in fact clearly and unambiguously provides for an injunction "in addition to any other relief to which it may be entitled." The standard remedy for breach of contract is, of course, damages. Rockwell also relies on the contract definition of "proprietary information" which specifically excludes information that comes into the public domain. This contract provision clearly allows Rockwell to use information that is proprietary at the time of contracting only after it enters the public domain. It cannot be reasonably construed as relieving Rockwell of liability for use made of proprietary information before it enters the public domain.

Rockwell's second argument is also without merit. Celeritas was undoubtedly harmed. It is in the business of licensing its technology. Celeritas entered into the NDA with Rockwell with the reasonable expectation that Rockwell would compensate it for any use made of the disclosed information. This expectation was the motivating factor for Celeritas to share its knowledge with Rockwell. After Celeritas disclosed its proprietary technology to Rockwell, Rockwell was faced with two legitimate choices: it could have used the technology and entered into a licensing agreement with Celeritas or it could have refrained from using the technology. It chose instead to use the technology without compensating Celeritas. To compensate Celeritas for the breach, the jury properly determined the license fee Rockwell would have paid had it not breached the agreement.

As to quantum, the amount of the damage award is far from speculative. The evidence established that lump-sum paid-up licenses based on projected royalties were common in the industry. Celeritas's damages expert testified as to a reasonable royalty rate based on the past licensing practices of Celeritas, Rockwell, and others in the modern business. The expert then determined the lump-sum amount Rockwell would have paid by multiplying the royalty rate by Rockwell's 1994 sales projections for the accused devices and then discounting the total to net present value. By adopting this lump-sum amount as the proper measure of damages, the jury implicitly accepted the expert's methodology.

Rockwell's third argument confuses the remedy for breach of contract with California's statutory remedies for misappropriation of trade secrets. It may be true that in the absence of a contract, liability for Rockwell's misappropriation of Celeritas's trade secrets may be statutorily limited to the "head start" period. See *Cal. Civ. Code* § 3426.3 (West 1997) ("A complainant may recover damages for the actual loss caused by misappropriation. . . . If neither damages [\*1360] nor unjust enrichment caused by misappropriation are provable, the court may order payment of a reasonable royalty for no longer than the period of time the use could have been prohibited."). However, liability for breach of contract is not so limited.

Celeritas's damages may include that which Rockwell might have paid for use of the technology at the time of the breach in 1994 if it had chosen not to breach the contract. At that time, it did not know what its actual sales figures would be or that the '590 patent would issue less than one year later, or whether it would issue at all. Given Rockwell's desire to incorporate the technology into its products and the uncertainty as to future events, the methodology used by the expert and implicitly adopted by the jury was not improper. There was substantial evidence to support the jury's determination that Rockwell would have accepted a lump-sum paid-up license based on its forecasts had it not breached the contract and to support the jury's conclusion as to quantum. Of course, the jury did not know what

licensing arrangement might have been worked out in March 1994, but such uncertainty does not bar contract recovery.

[HN3]

Damages for breach of contract must be clearly ascertainable. However, where the fact of damage has been established, the precise amount of the damage need not be calculated with absolute certainty. As long as there is available a satisfactory method for obtaining a reasonably proximate estimation of the damages, the defendant whose wrongful act gave rise to the injury will not be heard to complain that the amount thereof cannot be determined with mathematical precision.

*DuBarry Int'l, Inc. v. Southwest Forest Indus., Inc.*, 231 Cal. App. 3d 552, 562, 282 Cal. Rptr. 181 (1991) (quotation marks and citations omitted). Accordingly, the district court's denial of Rockwell's motion for a new trial on damages for Rockwell's breach of contract is affirmed.

### C. Patent Validity

The district court awarded Celeritas attorney fees under 35 U.S.C. § 285 as the prevailing party in an exceptional patent case. Rockwell argues that the infringement verdict, which is the basis for the award, cannot stand and that the district court erred by not granting its motion for JMOL on the issue of patent invalidity. Rockwell asserts that the claims of the patent are invalid as anticipated by either of two references.

One prior art reference cited by Rockwell was an article published in 1991 by the Telebit Corporation entitled, "The Static Characteristics of Analog Cellular Radio Channels and Their Effects Upon Data Transmission," CCITT Study Group XVII, Delayed Contribution D 136, Geneva, Oct. 29 - Nov. 6, 1991. Rockwell argues that the Telebit article discloses each limitation of the '590 patent claims. Celeritas responds that Rockwell has a heavy burden in sustaining that position because the Telebit article was disclosed to the PTO during prosecution of the '590 patent and the patent obviously was granted despite the existence of that reference. See *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, 909 F.2d 1464, 1467, 15 U.S.P.Q.2D (BNA) 1525, 1527 (Fed. Cir. 1991) (stating that "the burden of showing . . . invalidity . . . is especially difficult when the prior art was before the PTO examiner"). Celeritas further argues that substantial evidence supports the jury's implicit finding that the Telebit article fails to disclose a single carrier modem that incorporates de-emphasis (i.e., the "spectral shaper" of claim 2 of the patent).

In the PTO and to the jury, Celeritas emphasized that the article taught away from the claimed invention, teaching the solution of amplitude reduction, and expressly stating that de-emphasis would not work well in a single-carrier system. For example, Celeritas informed the PTO that:

more importantly, the Telebit article teaches away from Applicant's invention. First it should be understood that the Telebit article describes a simulation of a modem and a cellular radio system. The Telebit article describes a modem that uses a large number of simultaneous carriers to transmit data in contrast to single carrier modems for which Applicant's invention is intended, and teaches that the [\*1361] use of de-emphasis would not work for single carrier systems.

(emphasis in original). In addition to its "teaching away" argument, Celeritas asserts that the Telebit article fails to disclose a modem that uses a single-carrier data signal and that the de-emphasis circuit disclosed is not "in" the modem as required by claim 2. Rockwell responds that the Telebit article clearly discloses each limitation of the claims.

We agree with Rockwell that no reasonable jury could have determined that the Telebit article did not anticipate the claims of the patent. It is well settled that [HN4] a claim is anticipated if each and every limitation is found either expressly or inherently in a single prior

art reference. See *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 715, 223 U.S.P.Q. (BNA) 1264, 1270 (Fed. Cir. 1984). A reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. Thus, the question whether a reference "teaches away" from the invention is inapplicable to an anticipation analysis. See *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772, 218 U.S.P.Q. (BNA) 781, 789 (Fed. Cir. 1983) ("The law of anticipation does not require that the reference 'teach' what the subject matter of the patent teaches . . . It is only necessary that the claims under attack, as construed by the court, 'read on' something disclosed in the reference."), overruled in part on other grounds, *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1125, 227 U.S.P.Q. (BNA) 577, 588 (Fed. Cir. 1985) (in banc).

As a factual matter, the Telebit article itself and the testimony offered at trial conclusively demonstrate that the article discloses the use of a single-carrier data signal, not only multi-carrier signals. As Celeritas's own witnesses testified, the Telebit article describes a test signal that sends twenty-one tones to simulate a modulated signal. The article states that the test signal, composed of twenty-one tones, has "a probability distribution of magnitude that closely matches that of a V.29 modem." Dolan, the inventor of the '590 patent, testified that the V.29 signal is a single-carrier data signal. Thus, contrary to Dolan's statement to the PTO that the Telebit article only discloses the use of a "large number of simultaneous carriers," the article actually does disclose a simulated single-carrier data signal.

Regarding the use of de-emphasis in the transmit modem, the article states:

#### 4.1 De-emphasis in the Modem Transmitter

As discussed in Section 2.2, pre-emphasis of a wideband signal before limiting severely constrains the signal power and thereby the performance in the presence of noise and interference. To counteract the pre-emphasis a one-pole low-pass filter was simulated at the modem output . . .

This de-emphasis would cause severe inter-symbol interference in a single-carrier data signal; it may be feasible only for multicarrier signals.

It is clear that the first paragraph in this passage describes a simulated de-emphasis circuit at the output of a simulated modem, which the record shows must be the simulated V.29 modem using a single-carrier data signal. This is confirmed by the second paragraph, which discloses the results of the simulated single-carrier data signal and indicates difficulties with it. The article does clearly disclose the use of a de-emphasis circuit in a modem using a single-carrier data signal. The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed. The modem in the article is not disclosed to be inoperative. It may be that Dolan invented a solution to the problem cited in the article; however, the invention as claimed is not limited to the Dolan solution to that problem; the broad claims at issue read on what is disclosed in the Telebit article. Because it is beyond dispute that the Telebit article discloses each of the claimed limitations, the claims are anticipated and hence invalid. Accordingly, the district court erred by not granting Rockwell's motion for JMOL that the patent is invalid.

#### D. Misappropriation of Trade Secrets

Because we affirm the determination of liability under the contract claim, we also need not consider Rockwell's arguments regarding the jury's verdict for misappropriation [\*1362] of trade secrets. This portion of the verdict was not incorporated into the district court's judgment because Celeritas stipulated that it would accept the liability theory with the highest damage award. However, we need to consider the issue of Celeritas's cross-appeal.

Celeritas argues that the court clearly erred by not combining the contract award with the exemplary damage award. Rockwell responds that the stipulation suggested and agreed to by Celeritas bars such a recovery. We agree with Rockwell that Celeritas elected its remedy. That remedy was for breach of contract, and the exemplary damages accompanied the misappropriation award, which was not elected. Celeritas stipulated to accept the single highest award from the three causes of action consisting of patent infringement, trade secret misappropriation, and breach of contract in order to avoid complex jury instructions dealing with avoiding duplicative damages. This stipulation is reflected in the following colloquy between counsel for Celeritas and the court:

Counsel: Your Honor will only be required to enter judgment on the highest of those awards.

These three different causes of action give us different remedies for that wrong [use of technology without paying for it]. And we, Celeritas, see them as alternatives and will not ask the court to add them together.

The Court: In other words, you will accept the highest of the three?

Counsel: Correct.

The Court: Not require the court to try to determine whether there is any duplicative.

Counsel: I don't think that is necessary. I think that would be greedy, your honor. I think my stipulation is made. We'll take the highest amount and will be done with it.

It is thus clear from the record that Celeritas stipulated that judgment would be entered on a single claim. Celeritas cannot now avoid its stipulation in an attempt to increase its overall damage award. The purpose of the stipulation was to avoid an inquiry into the overlap in the damage awards arising from multiple related claims. The district court did not understand Celeritas to be reserving the right to exemplary tort damages regardless of the claim selected, and neither do we. It ill lies in the mouth of a party who waives a form of damages in the district court in order not to be greedy to be seeking to override that waiver in the appeals court. Accordingly, we affirm the district court's judgment awarding damages solely on the contract claim.

## CONCLUSION

The jury's verdict awarding Celeritas damages for breach of contract was supported by substantial evidence and the theory under which damages were awarded was not legally unsound. Thus, the district court did not err in denying Rockwell's motion for JMOL on liability and for a new trial on damages. Pursuant to Celeritas's stipulation, the district court properly awarded Celeritas damages only on its breach of contract claim. The district court erred, however, by not granting a JMOL that the claims of the '590 patent are anticipated by the Telebit article. The patent is invalid. Accordingly, the district court's award of attorney fees under 35 U.S.C. § 285 is reversed.

AFFIRMED-IN-PART and REVERSED-IN-PART

## COSTS

No costs.



TRANSCLEAN CORPORATION, JAMES P. VIKEN, JON A. LANG and DONALD E.  
JOHNSON, Plaintiffs-Appellants, v. BRIDGEWOOD SERVICES, INC., Defendant-Cross  
Appellant.  
01-1268, 01-1269

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT  
290 F.3d 1364; 2002 U.S. App. LEXIS 9609; 62 U.S.P.Q.2D(BNA) 1865

May 21, 2002, Decided

**SUBSEQUENT HISTORY:** Rehearing Denied July 2, 2002, Reported at: 2002 U.S. App. LEXIS 15633. Rehearing denied by *Transclean Corp. v. Bridgewood Servs., Inc.*, 2002 U.S. App. LEXIS 15633 (Fed. Cir., July 2, 2002)  
Related proceeding at *Transclean Corp. v. Reg'l Car Wash Distrib.*, 2004 U.S. Dist. LEXIS 11675 (D. Minn., June 18, 2004)

**PRIOR HISTORY:**Appealed from: United States District Court for the District of Minnesota.  
Judge Raymond L. Erickson. *Transclean Corp. v. Bridgewood Servs.*, 134 F. Supp. 2d 1049, 2001 U.S. Dist. LEXIS 4674 (D. Minn., 2001)  
*Transclean Corp. v. Bridgewood Servs.*, 77 F. Supp. 2d 1045, 1999 U.S. Dist. LEXIS 19267 (D. Minn., 1999)

**DISPOSITION:** Affirmed in part and vacated in part.

**CASE SUMMARY:**

**PROCEDURAL POSTURE:** Defendant infringer appealed the judgment of the United States District Court for the District of Minnesota which granted plaintiff patent owner summary judgment on the validity of its patent and on the infringer's non-infringement defense. The owner challenged the judgment reversing one of its damage awards.

**OVERVIEW:** The patent owner filed a patent infringement action against the infringer, alleging that it had infringed on its patent concerning an automatic transmission fluid changing apparatus. The district court found for the owner and awarded it damages, but subsequently reversed the portion of the award for reasonable royalty based upon the sale of the infringer's business. On appeal, the court affirmed in part and reversed in part. The court affirmed the grant of summary judgment to the owner on the validity of its patent because two prior patents did not anticipate the claims of the owner's patent. The court also affirmed the district court's grant of summary judgment on the infringer's non-infringement defense based upon the infringer's failure to respond to discovery requests. However, the court reversed the district court's grant of summary judgment the owner on one particular claim because it misconstrued the term "resilient" as used in the claim. The district court properly reversed the owner's damage award for reasonable royalty because the infringer showed that the price it received for its goodwill was not entirely due to its infringement of the patent.

**OUTCOME:** The judgment granting the patent owner summary judgment holding that the infringer infringed on a particular claim was reversed. The judgment was otherwise affirmed.

**CORE TERMS:** fluid, patent, resilient, infringement, royalty, summary judgment, transmission, dictionary, equalizing, patent infringement, resilience, infringer, infringing, fresh, noninfringement, invention, goodwill, circulation, exhibiting, false advertising, specification, deformation, returning, corresponding, compressed, diaphragm, receiver, automatic transmission, infringed, disclose

**LexisNexis(R) Headnotes**

Civil Procedure: Summary Judgment: Summary Judgment Standard

Civil Procedure: Appeals: Standards of Review: De Novo Review

[HN1] An appellate court reviews a district court's grant of summary judgment de novo, reapplying the same standard used by the district court. Summary judgment is appropriate if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law. *Fed. R. Civ. P. 56(c)*. The evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor.

When both parties move for summary judgment, the court must evaluate each motion on its own merits, resolving all reasonable inferences against the party whose motion is under consideration.

#### Civil Procedure: Trials: Judgment as Matter of Law

#### Civil Procedure: Appeals: Standards of Review: De Novo Review

[HN2] An appellate court reviews a district court's grant of judgment as a matter of law (JMOL) *de novo*, reapplying the JMOL standard used by the district court. JMOL is appropriate when a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue. *Fed. R. Civ. P.* 50(a)(1). To prevail, an appellant must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied from the jury's verdict cannot in law be supported by those findings.

#### Patent Law: Novelty & Anticipation

[HN3] A determination that a patent is invalid as being anticipated under 35 U.S.C.S. § 102 requires a finding that each and every limitation is found either expressly or inherently in a single prior art reference. To anticipate, the reference must also enable one of skill in the art to make and use the claimed invention. Because a patent issued by the U.S. Patent and Trademark Office is presumed to be valid, 35 U.S.C.S. § 282 (1994), the evidentiary burden to show facts supporting a conclusion of invalidity is clear and convincing evidence.

#### Patent Law: Infringement: Acts of Infringement

[HN4] A determination of infringement requires a two-step analysis. First, the court determines the scope and meaning of the patent claims asserted. Second, the properly construed claims are compared to the allegedly infringing device. Step two, comparison of the claim to the accused device, requires a determination that every claim limitation or its equivalent be found in the accused device. Those determinations are questions of fact.

#### Patent Law: Remedies: Damages

[HN5] The choice of methodology for calculating damages is within the discretion of the district court. In any event, the patent owner bears the burden of proving by a preponderance of the evidence the quantum of damages, an issue of fact for which the appellate court reviews the jury's decision for substantial evidence.

#### Patent Law: Remedies: Damages

#### Patent Law: Jurisdiction & Review: Standards of Review

[HN6] A decision to sanction a litigant pursuant to *Fed. R. Civ. P.* 37 is one that is not unique to patent law, and the court therefore applies regional circuit law to that issue. The Eighth Circuit reviews the imposition of sanctions under *Fed. R. Civ. P.* 37 for an abuse of discretion.

#### Patent Law: Novelty & Anticipation

[HN7] To anticipate a claim reciting a means-plus-function limitation, the anticipatory reference must disclose the recited function identically.

#### Patent Law: Novelty & Anticipation

[HN8] Anticipation by inherent disclosure is appropriate only when the reference discloses prior art that must necessarily include the unstated limitation.

#### Civil Procedure: Sanctions: Discovery Misconduct

[HN9] Because the imposition of a discovery sanction is not a matter substantially related to patent law, the court applies the law of the regional circuit.

#### Patent Law: Infringement: Acts of Infringement

[HN10] Where a party has already been held to be an infringer, and infringement of another claim does not increase its liability.

**Patent Law: Infringement: Claim Interpretation**

[HN11] Dictionaries, both general and technical, define the adjective "resilient" or its noun form "resilience" as encompassing that which returns to its original shape following a deformation in shape.

**Patent Law: Remedies: Damages**

[HN12] Reasonable royalty damages for patent infringement arise from the fact of infringement, and the portion of the sales price consisting of intangible goodwill is not the sale of infringing goods. It is partial compensation for the sale of a business.

**Patent Law: Remedies: Damages**

[HN13] The patent owner has the burden of proving the amount of reasonable royalty damages it is entitled to recover.

**Patent Law: Remedies: Damages**

[HN14] The district court's reasonable royalty award already compensates the patent owner for any goodwill the infringer garnered by infringement.

**Patent Law: Remedies: Damages**

[HN15] Enhancement of damages under *35 U.S.C.S. § 284* involves the fact-finder determining that the infringer engaged in culpable conduct and the court exercising its discretion to determine whether and to what extent to enhance the damages.

**Patent Law: Remedies: Damages**

[HN16] Factors to be considered by the court in the second step of determining whether to enhance patent infringement damages are: (1) deliberate copying; (2) infringer's investigation and good-faith belief of invalidity or non-infringement; (3) litigation conduct; (4) infringer's size and financial condition; (5) closeness of the case; (6) duration of the misconduct; (7) remedial action by the infringer; (8) infringer's motivation for harm; and (9) concealment). A finding of willful infringement authorizes but does not mandate an award or increased damages.

**Patent Law: Remedies: Damages**

**Patent Law: Jurisdiction & Review: Standards of Review**

[HN17] An appellate court reviews the court's analysis for an abuse of discretion.

**Patent Law: Remedies: Damages**

[HN18] The general rule is that the district court must normally explain why it decides that a case is not exceptional under *35 U.S.C.S. § 285* when a factual finding of willful infringement has been established and, if exceptional, why it decides not to award attorney fees. However, the United States Court of Appeals for the Federal Circuit has recognized an exception to that general rule in cases where the record adequately sets forth grounds for affirming the district court's actions.

**Antitrust & Trade Law: Consumer Protection: False Advertising**

[HN19] The purpose of Minn. Stat. § is to encourage private parties to police unlawful trade practices affecting the public interest.

**Trademark Law: Infringement: Determinations**

[HN20] The Eighth Circuit has recognized the universal requirement for actual usage of the mark in commerce. Use of the mark on documents does not satisfy the usage requirement when the mark can be affixed to the goods themselves. Furthermore, the usage of the marks must be as a source identifier rather than as a description of the goods' qualities.

COUNSEL: Alan M. Anderson, Fulbright & Jaworski L.L.P., of Minneapolis, Minnesota, argued for plaintiffs-appellants. With him on the brief was Christopher K. Larus.

Warren E. Olsen, Fitzpatrick, Cella, Harper & Scinto, of Washington, DC, argued for defendant-cross appellant. With him on the brief were Brian L. Klock and Stephen E. Belisle.

JUDGES: Before NEWMAN, LOURIE, and CLEVENGER, Circuit Judges. Opinion for the court filed by Circuit Judge LOURIE. Opinion dissenting-in-part filed by Circuit Judge CLEVENGER.

#### OPINIONBY: LOURIE

##### OPINION:

[\*1367] LOURIE, Circuit Judge.

Transclean Corporation, James P. Viken, Jon A. Lang, and Donald E. Johnson (collectively "Transclean") appeal from a judgment of the United States District Court for the District of Minnesota (1) reversing entry of a portion of a jury's damages award for infringement of Transclean's U.S. Patent 5,318,080, *Transclean Corp. v. Bridgewood Serv., Inc.*, No. 97-2298, slip op. at 28 (D. Minn. Jan. 8, 2001) ("Damages Opinion"); (2) denying its motion for enhanced damages under 35 U.S.C. § 284, *id.* at 66, as well as attorney fees under 35 U.S.C. § 285 and *Minn. Stat. § 8.31*, *Transclean Corp. v. Bridgewood Serv., Inc.*, 134 F. Supp. 2d 1049, 1061 (D. Minn. 2001) ("Attorney Fees Opinion"); and (3) granting summary judgment of noninfringement on its claim of trademark infringement, *Transclean Corp. v. Bridgewood Serv., Inc.*, 77 F. Supp. 2d 1045, 1094-95 (D. Minn. 1999) ("Summary Judgment Opinion"). Bridgewood cross-appeals from the court's grant of summary judgment that the '080 patent is not invalid for anticipation and that Bridgewood infringed claims 1-4 and 12. 77 F. Supp. at 1081, 1083, 1063. Bridgewood also cross-appeals from the court's denial of its motion for summary judgment of noninfringement of claim 13. *Id.* at 1087. For the reasons set forth below, we affirm-in-part and vacate-in-part.

#### BACKGROUND

Transclean is the assignee of the '080 patent, which is directed to an automatic transmission fluid changing apparatus. The fluid circulates from an automobile's automatic transmission case to a radiator and back via circulation lines. '080 patent at col. 1, ll. 6-12. The invention of the patent is designed to tap into a fluid circulation line and become part of the circulation system for the duration of the fluid changing procedure. *Id.* at col. 3, ll. 8-19. In that configuration, the invention collects used fluid as it circulates around and into the machine, while supplying new fluid into the circulation system. *Id.* Prior to the invention, such machines were not capable of matching the supply rate of new fluid to the outflow rate of used fluid. *Id.* at col. 2, ll. 56-68. As a result, one of two problems was likely to occur. First, if the supply rate was less than the outflow rate, the transmission could become starved of fluid, which could lead to excessive heating and [\*1368] damage to the transmission. *Id.* Second, if the supply rate exceeded the outflow rate, a buildup of internal fluid pressure problems by balancing the supply rate to the outflow rate. *Id.* at col. 3, ll. 8-19. Claim 1, the only independent claim, reads as follows:

1. In a fluid replacing apparatus for an automatic transmission an improvement having fluid circulation inlet and outlet ports comprising:

a fluid receiver adapted to be connected to the fluid circulation output port on said automatic transmission;

a source of fresh transmission fluid adapted to be connected to the fluid circulation inlet port on said automatic transmission so that fluid circulates therethrough; and

means connected to said fluid receiver and said source of fresh fluid, for equalizing the fluid flow into said fluid receiver and out of said source of fluid.

*Id.* at col. 8, ll. 10-23 (emphases added).

As can be seen, the claims recite a "means . . . for equalizing the fluid flow" in the manner authorized by 35 U.S.C. § 112, P 6. The specification discloses several structures corresponding to the claimed "means." According to one structure, the fluid receiver and source of fresh transmission fluid are segregated portions of the same tank, and the means for equalizing is a flexible diaphragm that defines the boundary dividing the tank into two segregated portions. *Id.* at figure 3. A structure with those characteristics is the subject of claim 13, which reads as follows:

13. The apparatus of claim 1 in which the means for equalizing the flow is comprised of means disposed intermediate the fluid receiver and source, said means exhibiting resilient characteristics for exerting a force, related to the pressure existing in the fluid circulation circuit of said transmission and said receiver, upon the fluid in said source.

*Id.* at col. 8, ll. 55-61 (emphasis added). Another structure corresponding to the means for equalizing in claim 1 is a pair of tanks, one for used fluid and one for fresh fluid charged by pressurized air. *Id.* at figs. 4, 6.

Bridgewood is a competing distributor of transmission service equipment to automobile service businesses. Bridgewood's accused device is the embodiment described in its own U.S. Patent 5,522,474. Briefly, Bridgewood's device consists of a reservoir divided into two chambers by a free floating piston. '474 patent, abstract. The reservoir above the piston is initially filled with fresh fluid, and the reservoir below the piston is initially empty and compressed. *Id.* Extending from each chamber is a line for connection to an automobile's automatic transmission fluid circulation system at a point where a technician breaks the fluid circuit. *Id.* Thereafter, operation of the transmission pump sends used fluid into the bottom chamber, thereby forcing the piston to expel fresh fluid from the top chamber into the transmission's fluid circulation system. *Id.* When the technician can see fresh fluid being pumped into the bottom chamber, the procedure is halted, as the fluid has been essentially completely replaced, *id.*, even though not all of the used fluid could possibly be expelled, *Attorney Fees Opinion* 134 F. Supp. 2d at 1056.

Bridgewood is no longer in business, having sold all of its assets, including goodwill, to Century Manufacturing Company for a total of \$7,744,000, which was \$6,522,000 above and beyond the book value of Bridgewood's tangible net worth. Century subsequently took a license under the '080 patent from Transclean, agreeing to a royalty rate of nine percent.

[\*1369] Transclean sued Bridgewood for infringement of the '080 patent and its TOTAL FLUID EXCHANGE and TOTAL FLUID X-CHANGE trademarks, as well as false advertising by Bridgewood's promotional claims that its device replaced "100%" or "every drop" of fluid. Before trial, both parties filed motions for partial summary judgment, Transclean seeking summary judgment on the issues of patent infringement and validity, and Bridgewood seeking summary judgment of noninfringement of claim 13 as well as Transclean's trademarks. The court granted all of those motions except that relating to claim 13. More specifically, the court granted summary judgment that the '080 patent was not anticipated by either U.S. Patent 3,513,941, issued to N.J. Becnel, or Japanese Patent 2-72299. *Summary Judgment Opinion* 77 F. Supp. 2d at 1081. Furthermore, the court granted Transclean's motion for summary judgment that Bridgewood infringed claims 1-4 and 12 of the '080 patent, after precluding Bridgewood from arguing noninfringement of those claims as a

sanction for Bridgewood's failure to answer an interrogatory seeking its bases for arguing noninfringement. 77 F. Supp. at 1062-63. Finally, the court granted Bridgewood's motion that Bridgewood had not infringed Transclean's trademarks. *Id.* at 1094-95.

The case was then tried to a jury, which found that Bridgewood willfully infringed claim 13 and engaged in false advertising. The jury awarded Transclean three types of damages for the patent infringement. Damages Opinion at 3. The first was a reasonable royalty based on Bridgewood's sales of infringing devices; the second was additional damages for the infringement; and the third was a reasonable royalty based on Bridgewood's sale of its business. *Id.*

In a post-trial motion, Bridgewood sought to overturn the jury's damages awards. The court partly agreed and held that as a matter of law Transclean was not entitled to more than \$1,874,500 for patent infringement. *Id.* at 65-66. Transclean also filed a post-trial motion seeking enhanced damages and attorney fees pursuant to 35 U.S.C. §§ 284 and 285 in light of the jury's finding of willful infringement, but the court denied both requests. *Id.* at 66. Additionally, Transclean filed a post-trial motion pursuant to Minnesota's private attorney general statute, *Minn. Stat. § 8.31*, seeking attorney fees it incurred in pursuing the false advertising claim, but the court denied that request as well. *Id.*

Transclean appeals and Bridgewood cross-appeals from the decisions of the district court. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

## DISCUSSION

[HN1] We review a district court's grant of summary judgment de novo, reapplying the same standard used by the district court. *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309, 1315, 47 USPQ2d 1272, 1275 (Fed. Cir. 1998). Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." *Fed. R. Civ. P.* 56(c). "The evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 91 L. Ed. 2d 202, 106 S. Ct. 2505 (1986). When both parties move for summary judgment, the court must evaluate each motion on its own merits, resolving all reasonable inferences against the party whose motion is under consideration. *McKay v. United States*, 199 F.3d 1376, 1380 (Fed. Cir. 1999).

[\*1370] [HN2] We review a district court's grant of judgment as a matter of law ("JMOL") de novo, reapplying the JMOL standard used by the district court. *Sextant Avionique, S.A. v. Analog Devices, Inc.*, 172 F.3d 817, 824, 49 USPQ2d 1865, 1869 (Fed. Cir. 1999). JMOL is appropriate when "a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue." *Fed. R. Civ. P.* 50(a)(1). To prevail, an appellant "must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied from the jury's verdict cannot in law be supported by those findings." *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893, 221 USPQ 669, 673 (Fed. Cir. 1984) (citation omitted).

[HN3] A determination that a patent is invalid as being anticipated under 35 U.S.C. § 102 requires a finding that "each and every limitation is found either expressly or inherently in a single prior art reference." *Celeritas Techs. Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1360, 47 USPQ2d 1516, 1522 (Fed. Cir. 1998). To anticipate, the reference must also enable one of skill in the art to make and use the claimed invention. *In re Donohue*, 766 F.2d 531, 533, 226 USPQ 619, 621 (Fed. Cir. 1985). Because a patent issued by the U.S. Patent and Trademark Office is presumed to be valid, 35 U.S.C. § 282 (1994), the evidentiary burden to

show facts supporting a conclusion of invalidity is clear and convincing evidence, *WMS Gaming Inc. v. Int'l Game Techs.*, 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1396-97 (Fed. Cir. 1999).

[HN4] A determination of infringement requires a two-step analysis. "First, the court determines the scope and meaning of the patent claims asserted . . . [Second,] the properly construed claims are compared to the allegedly infringing device." *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454, 46 USPQ2d 1169, 1172 (Fed. Cir. 1998) (en banc) (citations omitted). Step one, claim construction, is an issue of law, *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71, 34 USPQ2d 1321, 1322 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370, 134 L. Ed. 2d 577, 116 S. Ct. 1384 (1996), that we review de novo, *Cybor*, 138 F.3d at 1456, 46 USPQ2d at 1172 (Fed. Cir. 1998). Step two, comparison of the claim to the accused device, requires a determination that every claim limitation or its equivalent be found in the accused device. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29, 137 L. Ed. 2d 146, 117 S. Ct. 1040 (1997). Those determinations are questions of fact. *Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353, 48 USPQ2d 1674, 1676 (Fed. Cir. 1998).

[HN5] The choice of methodology for calculating damages is within the discretion of the district court. *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 1164, 17 USPQ2d 1922, 1925 (Fed. Cir. 1991). In any event, the patent owner bears the burden of proving by a preponderance of the evidence the quantum of damages, an issue of fact for which we review the jury's decision for substantial evidence. 926 F.2d at 1164 n.2, 17 USPQ2d at 1925 n.2.

[HN6] A decision to sanction a litigant pursuant to *Fed. R. Civ. P.* 37 is one that is not unique to patent law, *DH Tech, Inc. v. Synergystex Int'l, Inc.*, 154 F.3d 1333, 1343, 47 USPQ2d 1865, 1873 (Fed. Cir. 1998), and we therefore apply regional circuit law to that issue, *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1359, 50 USPQ2d 1672, 1675 (Fed. Cir. 1999) (en banc in relevant part). Because the Eighth Circuit, the pertinent regional circuit in this case, reviews the imposition of sanctions under Rule 37 for an abuse of discretion, *Givens v. A.H. Robins Co.*, 751 F.2d 261, 263 [\*1371] (8th Cir. 1984), we will do the same.

On appeal Transclean raises a number of issues concerning damages and trademark infringement. First, Transclean argues that the court erred in disallowing the jury's award of a reasonable royalty on Bridgewood's proceeds from the sale of its business. Second, Transclean argues that the court abused its discretion by not awarding it enhanced damages and attorney fees for patent infringement under 35 U.S.C. §§ 284 and 285. Third, Transclean argues that the court erred in not awarding it attorney fees for pursuing the false advertising claim. Finally, Transclean argues that the court erred in granting summary judgment of noninfringement of its trademarks.

Bridgewood cross-appeals the court's judgments of patent validity and infringement. In particular, Bridgewood argues that the court erred in granting summary judgment that the '080 patent is not invalid for anticipation under 35 U.S.C. § 102. As to infringement, Bridgewood argues that the court abused its discretion when it estopped Bridgewood from contesting infringement of claims 1-4 and 12 as a discovery sanction and when it denied Bridgewood's motion for summary judgment of noninfringement of claim 13. We address each issue in turn.

#### A. Patent Validity

Bridgewood asserts in its cross-appeal that the court erred when it granted summary judgment that neither the Becnel patent nor the Japanese patent anticipates the claims of the '080 patent. Although this is a cross-appealed issue, as is that on patent infringement, we

deal with them first because they logically precede damages issues, which are the principally appealed issues. Bridgewood contends that the court misconstrued the phrase "means for equalizing the fluid flow" appearing in claim 1 by requiring that the fluid flow rate, rather than just the volume of fluid, be equalized. Based on its erroneously narrow construction of the claimed function, the court, according to Bridgewood, included extraneous structure in that corresponding to the "means for equalizing" limitation. Bridgewood asserts that the proper corresponding structure is a fresh fluid tank connected to a fresh fluid tube with a valve, a used fluid tank connected to a used fluid tube, and a source of pressurized air. Bridgewood contends that either the Becnel or Japanese patent discloses all of the minimum corresponding structure, and that the dependent claims recite well-known features that are also disclosed by the Becnel or Japanese patents.

Transclean responds that the court properly interpreted the term "flow" to mean a rate, not a volume, as the specification discloses that equalization of flow rates is the objective of the invention. Transclean further contends that the invention disclosed in the Becnel patent does not necessarily equalize flow rates, and that the Japanese patent discloses an apparatus that equalizes fluid weights, not flow rates.

We agree with Transclean that the claim phrase "equalizing the fluid flow" refers to a rate, not just a volume. To construe that phrase, we look to the specification for guidance, *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1577 (Fed. Cir. 1996), and the specification clearly refers to the equalization of flow rates. For example, the patent describes problems that can occur in the prior art when the input flow rate of added fluid does not match the output flow rate of used fluid:

In the event fluid is allowed to drain faster than the rate of addition of fluid, the pump or torque converter in a [\*1372] transmission is likely to be starved and then will become excessively hot under which conditions a transmission will self-destruct if permitted to continue in operation. On the other hand, should excessive fluid be added to build up an internal pressure within the transmission, there is a strong likelihood that seals for shafts and/or valves, bearings, or the like or other internal components, within the transmission, may be irreparably damaged with a resulting failure of the transmission under subsequent operating conditions.

'080 patent at col. 2, ll. 56-68 (emphasis added). Furthermore, the "Summary of the Invention" states that the invention solves those problems:

Briefly, my invention is comprised of a fluid receiver for used fluid, a source of supply of fresh fluid, and a means for coordinating the introduction of fresh fluid with the draining of used fluid. With this in mind, it then only remains necessary to separate the fluid flow in a line that is external from the transmission so that the used fluid is drained into a suitable fluid container and the new fluid is introduced at the same rate that the used fluid exits. This can be accomplished in a number of ways, some of which will be described in more detail below.

Id. at col. 3, ll. 8-17 (emphasis added). Other passages in the patent echo the same idea. E.g., id. at col. 5, ll. 51-53; col. 8, ll. 1-8. Because the specification is clear as to the meaning of the phrase "equalizing the fluid flow," and no other intrinsic evidence suggests a different meaning for the phrase, we affirm the district court's construction of that phrase to require equalization of flow rate.

As the parties agree, the phrase "means for equalizing fluid flow" is a means-plus-function limitation governed by 35 U.S.C. § 112, P 6, and the recited function is "equalizing fluid flow." [HN7] To anticipate a claim reciting a means-plus-function limitation, the anticipatory reference must disclose the recited function identically. Cf. *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1238, 57 USPQ2d 1679, 1689 (Fed. Cir. 2001) ("Literal infringement of a means-plus-function claim requires that the accused device have structure

for performing the identical function recited in the claim."). In this case, neither the Becnel nor the Japanese patent contains such a disclosure.

The Becnel patent is described in the '080 patent as equalizing overall fluid volume, not flow rate. '080 patent at col. 1, l. 38 - col. 2, l. 68. Bridgewood presented testimony from Becnel, the inventor, that his invention could be operated in such a manner as to equalize flow rates. However, as the district court found, that manner is not disclosed in the Becnel patent itself, nor is it inherent in the operation of Becnel's invention. *Summary Judgment Opinion* 77 F. Supp. at 1081 ("Becnel was able to read the fluid gauges, and then manually adjust the flow of fresh fluid so as to equalize the fluid flows, but neither his declaration, nor [Bridgewood's patent expert's] opinion, offer any explanation as to how a person of ordinary skill would read the Becnel Patent specification, and recognize that this method of flow equalization is necessarily present in the embodiment disclosed in Fig. 5."). We conclude, as did the district court, that Bridgewood did not raise any genuine issue of material fact regarding anticipation of claim 1 by the Becnel patent. Accordingly, we affirm the court's conclusion that Transclean is entitled to summary judgment of non-anticipation as to the Becnel patent.

The Japanese patent likewise discloses equalization of fluid amount, but not necessarily fluid flow rates. Broadly speaking, the Japanese patent describes [\*1373]an "ATF [automatic transmission fluid] exchanger device," Jap. Pat. 2-72299, abstract (English translation), which, like the invention described in the '080 patent, comprises a supply of fresh fluid, a receptacle for used fluid, and hoses for connection to a transmission's fluid circulation system. Id. However, the Japanese apparatus also includes scales for measuring the weights of the fresh fluid supplied and used fluid removed, as well as a "detection means so that the difference between the amount of fluid drained and the amount of fluid supplied is maintained within an indicated range; and which automatically balances the amount of fluid drained and fluid supplied within an indicated range." Thus, the Japanese patent explicitly discloses that fluid weight is equalized, not necessarily fluid flow rate. Although it is possible that the detection means could under some circumstances (e.g., if the response time for the feedback loop is sufficiently fast) effectively equalize the flow rates as well, it is also possible for that not to be the case. Because [HN8] anticipation by inherent disclosure is appropriate only when the reference discloses prior art that must necessarily include the unstated limitation, *Cont'l Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268-69, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991) (emphasis added), the Japanese patent cannot inherently anticipate the claims of the '080 patent. We conclude, as did the district court, that Bridgewood did not raise any genuine issue of material fact regarding anticipation of claim 1 by the Japanese patent, and we therefore affirm the court's conclusion that Transclean is entitled to summary judgment of non-anticipation as to the Japanese patent. Thus, we affirm the court's conclusion that the claims of the '080 patent are not invalid under 35 U.S.C. § 102 as being anticipated by the Becnel or Japanese prior art patents.

## B. Patent Infringement

Bridgewood argues that the court abused its discretion when, as a discovery sanction, it precluded Bridgewood from asserting that it did not infringe claims 1-4 and 12, and when it denied Bridgewood's motion for summary judgment of noninfringement of claim 13. Regarding the first point, Bridgewood argues that the court impermissibly invoked an extreme discovery sanction without notice to Bridgewood, that Transclean was not prejudiced by Bridgewood's lack of response to Transclean's interrogatory, and that the court avoided its duty to construe the claim and relieved Transclean of its burden to prove infringement. Transclean responds that it was prejudiced by the lack of discovery and that the sanction was consistent with precedent.

We conclude that the district court acted within its discretion when it granted summary judgment of infringement as a discovery sanction. [HN9] Because the imposition of a

discovery sanction is not a matter substantially related to patent law, we apply the law of the regional circuit, in this case the Eighth Circuit. See *Midwest Indus.*, 175 F.3d at 1359, 50 (and elsewhere), *Givens*, 751 F.2d at 264, we are not convinced that the district court abused its discretion. Transclean legitimately sought to discover Bridgewood's grounds for its defense of noninfringement and was entitled to a reply to its interrogatory. When Bridgewood chose not to respond before the closing of discovery other than to voice its belief that the '080 patent was invalid and unenforceable, *Summary Judgment Opinion* 77 F. Supp. at 1059-60, 1060-61, the court was within its discretion to impose a sanction. The court found clear prejudice to Transclean, as it was precluded from conducting discovery on the infringement [\*1374] issues. *Id.* 77 F. Supp. at 1063. To hold that the district court abused its discretion would be to disarm the court of its important power to police its proceedings to ensure transparency and predictability and to discourage mischievous conduct by litigants. It will be a rare case in which we take such an action. Moreover, even if a lesser sanction such as exclusion of evidence may have been more closely tailored to the misconduct, see *Givens*, 751 F.2d at 263 (characterizing evidence exclusion as the "normal sanction" for failure to comply with a discovery deadline), the practical result would have been the same. Transclean's motion for summary judgment of infringement presented evidence sufficient to show infringement, and, in light of Bridgewood's non-response, that evidence was uncontradicted. Accordingly, we affirm the district court's grant of summary judgment of infringement of claims 1-4 and 12 of the '080 patent.

As for the second alleged abuse of discretion, denial of Bridgewood's motion for summary judgment of noninfringement of claim 13, Bridgewood argues that the court misconstrued the phrase "exhibiting resilient characteristics" to mean "returning to an original shape after being deformed" or "returning to its original position after being compressed." *Summary Judgment Opinion* 77 F. Supp. at 1087. Bridgewood contends that initial deformation of shape is inherent in the meaning of the expression and cites technical dictionary definitions in support of that contention. Under the correct construction of that expression, according to Bridgewood, the free-floating piston in its device does not "exhibit[] resilient characteristics." Moreover, Bridgewood contends that prosecution history estoppel and the all-limitations rule bar Transclean from asserting infringement under the doctrine of equivalents for that claim limitation because claim 13, in which it appears, was added during prosecution, whereas the originally submitted claims did not contain that limitation, and because vitiation of the "exhibiting resilient characteristics" limitation would result. Transclean responds that claim 13 requires only that "said means exhibit[] resilient characteristics," not that the means itself be "resilient." Transclean also cites common dictionary definitions and expert testimony in support of its view that the term "resilient" does not require initial deformation. Moreover, Transclean contends that claim 13 itself was never narrowed during prosecution and that Bridgewood's prosecution history estoppel argument was not raised in the district court and has therefore been waived.

Because we affirm the judgment of infringement of claims 1-4 and 12, we need not review the court's ultimate conclusion regarding infringement of claim 13. [HN10] Bridgewood has already been held to be an infringer, and infringement of another claim does not increase its liability. See *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1220, 36 USPQ2d 1225, 1231 (Fed. Cir. 1995). However, to put to rest any doubts regarding the proper construction of claim 13, because the patent has not been shown to be invalid and the issue has been fully ventilated by the parties, we will address that issue. We agree with Bridgewood that the court misconstrued the term "resilient." [HN11] Dictionaries, both general and technical, define the adjective "resilient" or its noun form "resilience" as encompassing that which returns to its original shape following a deformation in shape. See, e.g., McGraw-Hill Dictionary of Scientific and Technical Terms 1693 (5th ed. 1994) (defining the term "resilience" as the 'ability of a strained body, by virtue of high yield strength and low elastic modulus, to recover its size and form following deformation'); American Heritage Dictionary 1535 (3rd ed. 1992) (defining the term "resilient" as "returning to an original shape or

position, as after having been [\*1375] compressed"). The dissent, as did the district court, focuses on the word "or" in the preceding definition to support its view that the term "resilient" encompasses the returning to a position alone, without any shape deformation. We do not think that the use of the word "or" in that definition can overcome the meaning attributed to the term "resilient" by the patent's disclosure of only a flexible diaphragm dividing a tank into two chambers. See '080 patent; fig. 3; col. 4, ll. 54-55 (depicting and describing "a flexible rubber-like diaphragm"). Furthermore, to the extent there is a difference between the common and technical meanings of the terms, the term "resilient" is used in the '080 patent in a technical context to describe a component of a mechanical apparatus, and a technical dictionary is therefore a better source to inform the meaning of the term to a skilled artisan in this case. Moreover, we do not share the dissent's view that the phrase "exhibiting resilient characteristics" describes a function in a means-plus-function limitation. On the contrary, the means-plus-function limitation further defined in claim 13 is the "means for equalizing the flow" previously set forth in claim 1. Id. at col. 8, ll. 20-23, ll. 55-61. According to the claim language, the only function performed by that "means" is "equalizing the flow." The phrase "exhibiting resilient characteristics" is not a second function performed by that "means"; rather, the phrase further defines characteristics of that "means." It is therefore, appropriate, indeed mandatory under 35 U.S.C. § 112, P 6, to look to the corresponding structure in the specification to ascertain the meaning of the phrase. As already noted, that corresponding structure, "a flexible rubber-like diaphragm," '080 patent, col. 4, ll. 54-55, is "resilient" in the sense that it tends to return to its original shape, not just its original position. We therefore conclude that the phrase "exhibiting resilient characteristics" in the '080 patent requires initial shape deformation. Because the jury's finding of infringement of claim 13 was premised on a construction of that phrase at odds with ours, we vacate the judgment of infringement of claim 13.

### C. Patent Infringement Damages

The jury awarded three types of damages for patent infringement: (1) \$934,618 as a reasonable royalty on Bridgewood's sales of infringing devices; (2) \$1,874,500 as "additional damages . . . necessary to adequately compensate for Bridgewood's infringement"; and (3) \$2,708,225 as a reasonable royalty based upon Bridgewood's proceeds from the sale of its business to Century. Damages Opinion at 3. The court reversed the third award, holding that Transclean was not entitled to such an award as a matter of law. Id. at 65. As to the first and second, the court granted Bridgewood's motion for a new trial or remittitur in the amount of \$1,874,500, the highest amount, based on the evidence, that the jury could have properly awarded for patent infringement. Id. at 61, 66. Transclean apparently accepted the remittitur.

Transclean appeals from the court's decision concerning the third award only. Transclean cites *Minco, Inc. v. Combustion Eng'g, Inc.*, 95 F.3d 1109, 40 USPQ2d 1001 (Fed. Cir. 1996) in support of its argument that, because Bridgewood's sole source of revenue was an infringing product and Bridgewood generated \$6,500,000 in goodwill from the sale of its business to Century, Transclean is entitled to recover the value of that goodwill. Transclean asserts that to allow Bridgewood to retain that windfall would create an incentive for others to infringe a patent and then sell their businesses.

Bridgewood responds that this case is distinguishable from Minco because that case involved lost profits, not a reasonable [\*1376] royalty, and a reasonable royalty must be based on sales of infringing articles. Bridgewood contends that payment for goodwill is not the sale of infringing goods, was attributable to many factors other than the technology of its fluid changing machines, and that Transclean did not prove a nexus between the patent infringement and the value of the goodwill.

We agree with Bridgewood that Minco does not control this case. As indicated, it was a lost profits case, not one based on a reasonable royalty. Although Minco acknowledged that "fashioning an adequate damages award depends on the unique economic circumstances of

each case," *95 F.3d at 1118, 40 USPQ2d at 1007*, we held that the patent owner in that case could not recover damages based on the infringer's sale of its business. *95 F.3d at 1121*. More specifically, the patent owner sought lost profits calculated as the difference between the sales price of the infringer's business and its expert's valuation of the business without the infringing devices. *Id. at 1120*. The patent owner asserted that the purchaser would have purchased its business instead of the infringer's, had it not been for the infringement, *id.*, and the excess sales price thus constituted part of the patent owner's lost profits. The district court did not accept that assertion, and we affirmed that decision. *Id. at 1121*. Furthermore, we explained that any award based on the infringer's sale of its business would be duplicative of the reasonable royalty the infringer had already received based on the infringer's sales of infringing goods. *Id.* ("The district court's reasonable royalty award already compensates [the patent owner] for any goodwill [the infringer] garnered by infringement."). Transclean's citation of *Minco* as controlling this case is thus unsound; it is an example of the unhelpful advocacy that is at times made to this court, in which counsel cites general language from a prior case, rather than its holding. In fact, the holding of *Minco* supports Bridgewood's position, not Transclean's.

We must analyze Transclean's claim for a percentage of Bridgewood's business sale proceeds as it was asserted, as a claim for a reasonable royalty, not for lost profits. [HN12] Reasonable royalty damages for patent infringement arise from the fact of infringement, and the portion of the sales price consisting of intangible goodwill is not the sale of infringing goods. It is partial compensation for the sale of a business. Whether or not proceeds from the sale of a business including tangible assets such as infringing inventory would be compensable as a remedy for patent infringement we are not in a position to say; that case is not before us. What is clear is that the portion of a sales price consisting of goodwill, i.e., compensation in excess of tangible assets, is not sales of infringing goods that can form the base for determination of a reasonable royalty. No such precedent exists, nor are we prepared to distort the statute to set one.

In addition, as a matter of proof, Transclean has not established the amount, if any, of a reasonable royalty on Bridgewood's sale of its business it is entitled to recover. [HN13] Transclean had the burden of proving the amount of reasonable royalty damages it is entitled to recover. *Id.* The most relevant inquiry in that respect would seem to be the amount of the business's value that is attributable to the patent infringement. Transclean offered expert testimony that the entire goodwill above and beyond the value of Bridgewood's tangible assets was attributable to patent infringement because Bridgewood was a single product company and that product infringed Transclean's patent. Damages Opinion at 29-30. However, the district court disagreed, concluding that the opinion testimony was conclusory and belied by Bridgewood's arguments [\*1377] that Bridgewood's goodwill was attributable to other factors (e.g., customer lists, brand identity, product quality, and pricing). *Id.* at 30-31. We perceive no error in the district court's analysis or conclusion. Moreover, to the extent that Transclean argues that the goodwill was ultimately attributable to Bridgewood's sales of infringing machines, any award of reasonable royalty damages based on goodwill transferred when the business was sold would be a double recovery, as Transclean has already been awarded damages that fully compensate it for Bridgewood's past sales. See *Minco*, *95 F.3d at 1121, 40 USPQ2d at 1010* [HN14] ("The district court's reasonable royalty award already compensates [the patent owner] for any goodwill [the infringer] garnered by infringement."). To the extent that the extra recovery Transclean seeks would be duplicative, we see no merit to Transclean's argument that Bridgewood is retaining a windfall that would create an incentive for infringers to sell infringing businesses with impunity.

For the reasons stated above, we conclude that the court did not err when it ruled that, as a matter of law, Transclean was not entitled to a reasonable royalty on proceeds from Bridgewood's sale of its business.

## C. Enhanced Damages

The jury found that Bridgewood's infringement was willful. Transclean argued to the jury that it made Bridgewood aware of the '080 patent, but that Bridgewood did not obtain an opinion of counsel and did not abate its manufacture or sale of the infringing machines. Bridgewood argued that the fact that it obtained its own patent on an automatic transmission fluid changing machine demonstrated a good faith belief that it was not an infringer. Bridgewood argued that when it received advice from its patent attorney concerning the patentability of its invention over the '080 patent, it received an implicit opinion of noninfringement. Although the jury agreed with Transclean that Bridgewood had willfully infringed the '080 patent, the court, after applying the factors set forth in *Read Corp. v. Portec, Inc.*, 970 F.2d, 816, 826-27, 23 USPQ2d 1426, 1435-36 (Fed. Cir. 1992) (listing nine factors), declined to enhance the patent infringement damages. Damages Opinion at 13-22.

Transclean contends that the court abused its discretion by not enhancing the damages in light of the jury's finding of willfulness. Transclean also asserts that the court erroneously assumed that the only way it could enhance the damages was by trebling them, misunderstanding that an enhancement of less than trebling was a permissible option. Bridgewood responds that a finding of willful infringement does not mandate enhancement of damages, that the court did not misunderstand the law on enhancement, and that the court properly considered the Read factors.

We agree with Bridgewood that the court acted within its discretion in not enhancing the damages award. [HN15] Enhancement of damages under 35 U.S.C. § 284 involves the fact-finder determining that the infringer engaged in culpable conduct and the court exercising its discretion to determine whether and to what extent to enhance the damages. *Jurgens v. CBK, Ltd.*, 80 F.3d 1566, 1570, 38 USPQ2d 1397, 1399 (Fed. Cir. 1996). The jury's finding of willfulness satisfies the first step, see id., and is also one of the factors the court assesses in performing the second step, see *Read*, 970 F.2d at 827, 23 USPQ2d at 1435. However, there are other factors relevant to the second step. See id. ([HN16] listing as factors: (1) deliberate copying; (2) infringer's investigation and good-faith belief of invalidity or non-infringement; (3) litigation conduct; (4) infringer's size and financial [\*1378] condition; (5) closeness of the case; (6) duration of the misconduct; (7) remedial action by the infringer; (8) infringer's motivation for harm; and (9) concealment). A finding of willful infringement "authorizes but does not mandate an award or increased damages." *Modine Mfg. Co. v. Allen Group, Inc.*, 917 F.2d 538, 543, 16 USPQ2d 1622, 1625 (Fed. Cir. 1990). In this case, the court considered the pertinent Read factors carefully, Damages Opinion at 13-22, and although we may or may not have reached a different conclusion if we had been in the district court's shoes, we wear our own shoes. [HN17] We review the court's analysis for an abuse of discretion, and we are satisfied that such an abuse did not occur.

We also agree with Transclean that the court did not erroneously assume that its only options were to treble the patent infringement damages or not enhance the damages at all. The court's opinion states, "In exercising our discretion to enhance damages, however, we are limited to a trebling of the basic damage award." Damages Opinion at 10 (quoting *Signtech USA, Ltd. v. Vutek, Inc.*, 174 F.3d 1352, 1358-59, 50 USPQ2d 1372, 1376 (Fed. Cir. 1999)). We read that statement, as it was intended in Signtech, to simply recognize the upper range of the possible enhancement. See *Signtech*, 174 F.3d at 1358-59, 50 USPQ2d at 1376 ("The district court enjoys discretion to choose whether to award enhanced damages to the claimant and in what amount. This discretion, however is limited to a trebling of the basic damage award.") (citations omitted) (emphasis added). Elsewhere in the same opinion, the court makes statements recognizing that a range of enhancement is possible. See Damages Opinion at 8 ("The court determines, exercising its sound discretion, whether, and to what extent, to increase the damages award . . . ") (quoting *Jurgens*, 80 F.3d at 1570, 38 USPQ2d at 1399) (emphasis added); Damages Opinion at 21 ("The paramount determination in deciding to grant enhancement and the amount thereof is . . . ") (quoting *Read*, 970 F.2d, at 826, 23 USPQ2d at 1435) (emphasis added). See also *Modine*, 917

*F.2d at 543 n.3, 16 USPQ2d at 1625 n.3* ("The fact that the court's opinion focuses upon treble damages does not necessarily mean that the judge failed to consider lesser multiples of damages.").

#### E. Attorney Fees

After the trial, Transclean filed a motion for attorney fees, and the court granted that motion in part, awarding Transclean its attorney fees arising from arguing two issues. First, pursuant to 35 U.S.C. § 285, the court awarded Transclean attorney fees for defense of a charge of inequitable conduct asserted by Bridgewood. Damages Opinion at 27. The court's opinion does not address attorney fees under 35 U.S.C. § 285 except in relation to the inequitable conduct issue. Second, pursuant to Minnesota's private attorney general statute, *Minn. Stat. § 8.31*, the court awarded Transclean attorney fees for its successful claim that Bridgewood engaged in false advertising by promoting its transmission fluid changing machine as replacing "100%" or "every drop" of transmission fluid. *Id.* However, the court later revoked that award for two reasons: Transclean had unclean hands by promoting its own service as a "total" fluid exchange, and Transclean did not object to Century's use of the same advertisements after Century had purchased Bridgewood and taken a license to the '080 patent from Transclean.

Transclean now argues that the court abused its discretion by not awarding Transclean attorney fees under 35 U.S.C. § 285 for its entire patent infringement claim when the jury determined that Bridgewood's infringement was willful and [\*1379] by not stating its reasons for declining to award attorney fees apart from those related to inequitable conduct. Transclean further argues that the court abused its discretion by not ultimately awarding attorney fees under *Minn. Stat. § 8.31* for its false advertising claim. Bridgewood responds that a finding of willful infringement does not mandate a determination that a case is exceptional, as that term is used in 35 U.S.C. § 285, and that not every exceptional case is deserving of an award of attorney fees. Bridgewood further responds that the court set forth legitimate reasons for not awarding attorney fees for the false advertising claim and thus acted within its discretion.

With regard to attorney fees for patent infringement, we agree with Bridgewood. Transclean is correct in stating [HN18] the general rule that the district court must normally explain why it decides that a case is not exceptional under 35 U.S.C. § 285 when a factual finding of willful infringement has been established and, if exceptional, why it decides not to award attorney fees, *S.C. Johnson & Son, Inc. v. Carter-Wallace, Inc.*, 781 F.2d 198, 201, 228 USPQ 367, 369 (Fed. Cir. 1986). However, we have recognized an exception to that general rule in cases where the record adequately sets forth grounds for affirming the district court's actions. *Carroll Touch, Inc. v. Electro Mech. Sys. Inc.*, 15 F.3d 1573, 1584, 27 USPQ2d 1836, 1845 (Fed. Cir. 1993) (citing *Consol. Al. Corp. v. Foseco Int'l, Ltd.*, 910 F.2d 804, 814, 15 USPQ2d 1481, 1488-89 (Fed. Cir. 1990)). In this case, the court's careful analysis of the Read factors regarding enhancement of damages suffices as grounds for affirming the court's implicit conclusion that the infringement case was not exceptional within the meaning of 35 U.S.C. § 285.

With regard to attorney fees for false advertising, we agree with Bridgewood. Transclean's claim for attorney fees arising from the false advertising cause of action was based on *Minn. Stat. § 8.31*. [HN19] The purpose of that statute is to encourage private parties to police unlawful trade practices affecting the public interest. *Ly v. Nystrom*, 615 N.W.2d 302, 313-14 (*Minn.* 2000). The court determined that, while Transclean's cause of action against Bridgewood for false advertising was on its face one that qualified for attorney fees under the statute, Attorney Fees Opinion at 11, Transclean's own use of advertising that was arguably equivalent in falsity and Transclean's tolerance of Century's use of the same advertising when it licensed Transclean's patent erased any public benefit accruing from the successful action against Bridgewood, *id.* at 12-14. The district court's reasoning is sound, and we

discern no abuse of discretion in its decision not to award Transclean attorney fees for its false advertising claim.

#### F. Trademark Infringement

Transclean brought a cause of action for trademark infringement, asserting that Bridgewood infringed Transclean's TOTAL FLUID EXCHANGE and TOTAL FLUID X-CHANGE unregistered trademarks under section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a)(1), and Minnesota law. The court granted Bridgewood's motion for summary judgment of noninfringement on the ground that there was no genuine issue of material fact relating to Transclean's adequate usage of the marks in commerce. *Summary Judgment Opinion* 77 F. Supp. at 1094-95. Transclean argues that a genuine issue of material fact regarding that issue was raised by an affidavit from James P. Viken, Transclean's CEO and inventor on the '080 patent, stating that Transclean had used the marks on its products and documents since 1994. *Id.* at 1093-94. Bridgewood responds that the affidavit is conclusory and [\*1380] does not designate specific facts concerning the marks' usage.

We agree with Bridgewood that Transclean failed to raise a genuine issue of material fact as to nondescriptive usage of the mark on the goods. We apply Eighth Circuit law to this issue, and [HN20] the Eighth Circuit has recognized the universal requirement for actual usage of the mark in commerce, *First Bank v. First Bank Sys., Inc.*, 84 F.3d 1040, 1044 (8th Cir. 1996). Use of the mark on documents does not satisfy the usage requirement when the mark can be affixed to the goods themselves, *Elec. Communications, Inc. v. Elec. Components for Industry Co.*, 443 F.2d 487, 492 (8th Cir. 1971), as is the case here, *Summary Judgment Opinion* 77 F. Supp. 2d at 1094. Furthermore, the usage of the marks must be as a source identifier rather than as a description of the goods' qualities. *First Bank*, 84 F.3d at 1044. In this case, the Viken affidavit is deficient in two ways, even if assumed to be accurate. First, the reference to documents is irrelevant, *Elec. Communications*, 443 F.2d at 492-93. Second, on its face, the affidavit does not purport to show that the use was as a source identifier. Indeed, the record evidence shows that the marks were used in a purely descriptive manner, e.g., "TFX TOTAL FLUID EXCHANGE SYSTEM FOR AUTOMATIC TRANSMISSIONS by Transclean Corp." Accordingly, the court did not err when it concluded that the Viken affidavit failed to raise a genuine issue of material fact regarding usage of the Transclean's marks, and we affirm the court's grant of summary judgment in favor of Bridgewood on the trademark claims.

#### CONCLUSION

We commend the district court for its thorough and competent handling of a complex case involving a large number of difficult issues. We affirm all aspects of the court's decision except one. The court did not err in granting summary judgment that the '080 patent is not anticipated by either the Becnel or Japanese prior art patents. Nor did the court err in granting summary judgment that Bridgewood did not infringe Transclean's trademarks, or in granting Bridgewood's post-trial motion for reversal of the jury's award of damages based on a reasonable royalty of Bridgewood's sale of its business. Furthermore, the court did not abuse its discretion in entering a judgment of infringement of claims 1-4 and 12 as a discovery sanction against Bridgewood. Nor did the court abuse its discretion when it declined to award Transclean enhanced damages and attorney fees under the patent statute or Minnesota law. However, the court did err when it construed the phrase "exhibiting resilient characteristics" in claim 13 of the '080 patent, and we therefore vacate the jury's determination, based on the court's erroneous claim construction, that Bridgewood infringed claim 13. Accordingly, we

AFFIRM-IN-PART and VACATE-IN-PART.

DISSENTBY: CLEVENGER (In Part)

DISSENT:

CLEVINGER, Circuit Judge, dissenting in part.

I agree with the majority's resolution of the validity, damages, and attorney fees issues as well as its determination that the district court did not abuse its discretion in precluding Bridgewood from asserting noninfringement of claims 1-4 and 12 as a sanction for various discovery abuses. Furthermore, I agree with the majority that the district court properly granted summary judgment to Bridgewood on Transclean's trademark infringement claim. However, in my view the majority's construction of the term "resilient" in claim 13 is unduly narrow and departs from the term's ordinary meaning. Therefore, [\*1381] I respectfully dissent from that portion of the majority's opinion vacating the district court's claim construction and the jury's finding of infringement as to that claim.

This case asks us to decide the meaning of the word "resilient." That word is not defined in the specification. Indeed, "resilient" appears in the patent exactly once--in claim 13:

The apparatus of claim 1 in which the means for equalizing the flow is comprised of means disposed intermediate the fluid receiver and source, said means exhibiting resilient characteristics for exerting a force, related to the pressure existing in the fluid circulation circuit of said transmission and said receiver, upon the fluid in said source.

U.S. Patent No. 5,318,080, col. 8, lines 55-61 (emphasis added). Because the patentee has not chosen to be his own lexicographer in this instance, "resilient" should carry its ordinary meaning in the art. Transclean asserts that "resilient" encompasses the ability to return to an original shape or position after being compressed, while Bridgewood argues that a resilient means must be capable of returning to an original shape and position after being compressed--in other words, that it must be inherently elastic.

To help us divine the meaning of "resilient," Transclean has provided dictionary definitions of "resilient" as well as expert testimony regarding what one of skill in the art would understand the term to mean. In contrast, Bridgewood proffers definitions of "resilience" from technical dictionaries. The district court properly rejected Bridgewood's definitions of "resilience" and adopted instead the ordinary meaning of the actual claim term, resilient. The majority, based on the supposed superiority of technical dictionaries over ordinary dictionaries, prefers Bridgewood's definition.

The district court gave the word "resilient" its ordinary dictionary meaning, possessing "the capability of 'returning to an original shape or position, as after having been compressed.'" *Transclean Corp. v. Bridgewood Services, Inc.*, 77 F. Supp. 2d 1045, 1087 (D. Minn. 1999) (quoting American Heritage Dictionary 1535 (3d ed. 1992) (emphasis added)). In other words, the broad term "resilient characteristics" can include a variety of different properties such as the ability to return to an original position after being exposed to a force, or the ability to return to an original shape after having been deformed. This meaning is in accord with the definition found in other common dictionaries. See, e.g., Websters Third New International Dictionary (unabridged) 1932 (defining resilient as "returning freely to a previous position, shape or condition: as a: moving swiftly back . . . b: capable of withstanding shock without permanent deformation or rupture . . . c: SPRINGY. . . ." (first emphasis added); Oxford English Dictionary 714 (2d Ed. 1989) (defining resilient as "1. Returning to the original position; springing back, recoiling, etc." and "2. Resuming the original shape or position after being bent, compressed, or stretched"); Random House Webster's Unabridged Dictionary 1638 (2d ed. 1993) (defining resilient as "1. springing back; rebounding" and "2. returning to the original form or position after being bent, compressed, or stretched") (emphasis added). This meaning is in accord with the expert testimony proffered by Transclean, which explained that the patent uses the term resilient to mean "returning to the, some earlier position . . . or shape."

To support its proposed definition, Bridgewood cites various technical dictionaries that, supposedly, define "resilient" or 'resilience.' A closer examination of these sources reveals, however, that the technical definitions provided by Bridgewood [\*1382] in fact relate the definition of "resilience" and not "resilient." And, unlike "resilient," "resilience" generally refers to the stored energy of a strained--and typically elastic--material. For example, Van Nostrand's Scientific Encyclopedia 2673 (8th ed. 1995) defines resilience as follows: "resilience of a body measures the extent to which energy may be stored in it by elastic deformation." The Dictionary of Mechanical Engineering 314 (4th ed. 1996) defines resilience as "the stored energy of a strained or elastic material, such as in a compressed spring or in rubber dampers, which have inherent damping properties." See also Chambers Dictionary of Science and Technology 980 (1999) (defining resilience as the "stored energy of a strained material, or the work done per unit volume of an elastic material by a bending moment, force, torque or shear force, in producing strain").

The majority chooses to rely upon Bridgewood's proffered definitions of "resilience" rather than the ordinary meaning of the actual claim term, "resilient," for two reasons. First, the majority finds that technical dictionaries are generally superior to common dictionaries. While dicta in *Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1267, 59 USPQ2d 1865, 1870 (Fed. Cir. 2001), states the view that technical dictionaries are preferred to common dictionaries, neither that case nor the case upon which it relied, *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 45 USPQ2d 1429 (Fed. Cir. 1998), involved a conflict between a common dictionary definition and that found in a scientific treatise--and neither does this case. The technical definitions are simply inapt because they define the wrong word--resilience instead of resilient. Indeed, the "common dictionaries" rejected by the majority are the only sources before the court that define both resilient and resilience, and notably, they define resilience in the same way as the supposedly superior technical dictionaries. For example, Webster's Third New International Dictionary 1932 (1993) defines resilience as follows:

1a: an act of springing back: REBOUND, RECOIL, ELASTICITY b: capability of a strained body to recover its size and shape after deformation, esp. when the strain is caused by compressive stresses--called also elastic resilience

2: the recoverable potential energy of an elastic solid body or structure due to its having been subjected to stress not exceeding the elastic limit.

(Second emphasis added.) While it may often be preferable to look to a technical dictionary or treatise to provide the technical definition of a term as understood by practitioners of a particular art, I think that preference must fade when the technical dictionary does not provide a definition of the precise term used in the claim language. Therefore, I would hold that the trial court properly adopted the common dictionary definition of "resilient" as proffered by Transclean.

The majority shores up its view of the correct meaning for "resilient" by holding that the phrase "exhibiting resilient characteristics for exerting a force" does not describe part of the function of the "means for equalizing the flow" limitation. I disagree with that holding, for it is clear to me that the "exhibiting resilient characteristics" phrase does define function. If I am correct on this point, then of course it is impermissible to define the function by reference to structure disclosed in the written description. Function must be defined by reference to ordinary principles of claim interpretation, before proceeding to determine corresponding structure. See *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1361, 54 USPQ2d 1308, 1313 (Fed. Cir. 2000). The majority does not disagree with me on this point: if the phrase in question defines function, then [\*1383] resort to the specification to find structure to define the function is simply wrong, and ordinary tools of claim interpretation apply.

Instead, the majority holds that the phrase in question is actually part of the means for equalizing the flow, and that resort to the specification is required to find the structure corresponding to the means limitation. Thus, from the specification the majority fetches the flexible rubber-like diaphragm, and thereupon concludes that "exhibiting resilient characteristics" must require initial shape deformation because that is the characteristic of the diaphragm.

The majority's rationale is self-destructive. If the diaphragm is indeed the structure that corresponds to the "means for equalizing the flow" limitation--as both parties and all the judges on the case agree--then the majority must come to grips with the stark fact that the jury found that the piston structure in Bridgewood's device is structurally equivalent, for § 57 *Or. 541, 112 P 6* infringement purposes, to the diaphragm disclosed in Figure 3. Indeed, the case was submitted to the jury precisely to resolve disputed issues of fact on the structural equivalence of the accused piston and the diaphragm structure. No question has been raised that substantial evidence does not support the jury's verdict. Consequently, if, as the majority holds, "exhibiting resilient characteristics for exerting a force" must be understood as merely "further defining the structure of [the] means, " ante at 16, there is no possible basis for disturbing the jury's verdict of infringement.

In short, the majority is wrong on any interpretation of the disputed phrase. If the phrase describes function, it must be interpreted by ordinary interpretative canons, as did the district court. If the phrase is to be interpreted as part of the means limitation, as the majority holds, then the jury verdict of infringement must stand. Either way, the jury verdict of infringement cannot properly be upset, and I respectfully dissent from the majority on this point.

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